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THE URINARY TRACT AS A FOCUS OF INFECTION IN ARTHRITIS

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Arthritis has become such an important question during the past few years that any kind of study which will elucidate the question of etiology is worthwhile. It is commonly regarded as a disease due to uncured foci of infection, and the only real progress which to my knowledge has been made during the past twenty years has been based upon this assumption. The common regions of the body which are thought of as harboring bacteria over a long period of time with or without local activity are:

1. Teeth.
2. Tonsils.
3. Prostate and vesicles.
4. Sinuses and bronchi.
5. Intestines, including appendix and gallbladder.

Of these regions the first three are commonly held to be guilty of the most harm, and facts seem to bear this out. Pemberton in his recent book quotes roughly that in all the cases studied by him, 50% had infected teeth, 31% had infected tonsils, and 15% had infected genitourinary tracts. These figures leave the sinuses and intestinal tract out entirely. Clinical experience of most men will confirm such conclusions.

In my own experience genitourinary infections have undoubtedly played a more important part as causative agents than is shown by Pemberton's figures. I took occasion recently to list the cases of arthritis which have been in the University Hospital during the past year or so, and found a striking fact. Out of fifty cases, the only focus definitely demonstrated was in 40% a genitourinary one. In 42% there was a genitourinary infection plus an infection in either teeth or tonsils. In other words, 82% had infection along the urinary tract and only 18% did not have it, but were infected in teeth or tonsils or both. And of the entire number 40% had only genitourinary infection. Certaily a strong indication that teeth and tonsils are not so important in this hospital, as they seem to have been elsewhere.

Such a discrepancy in figures leads me to remark that I doubt the accuracy of many figures given along this line. Particularly in figures concerning women, how often is a careful history taken regarding venereal disease? And again, how much less often is a careful search made for pus in the urine or bacteria in the smear from cervix or urethra? Every tonsil has bacteria in it, and rare is the mouth which has perfectly healthy gums and roots. These are all put down, while the urinary tract is skimped over and only the grosser or more active infections are caught. I have on numerous occasions examined urine and found no cells in it, then massaged the prostate and found a large amount of pus, which of course was due to infection. If these examinations are not carefully made by trained men (and they usually are not) the reports are bound to be inaccurate.

Genitourinary infections are exceedingly numerous. Pelouze states that from 80% to 90% of all men have gonorrhea some time during their lives. I rather think this figure is correct. Certainly it is not too

high. Of this number at least 20% suffer from "complications," meaning that the disease goes back into the posterior urethra and involves the prostate and seminal vesicles. In other words almost one-fourth of our entire male population suffers at some time or other a gonorrheal infection of the prostate and vesicles, which invariably lasts three months or more and produces a perfect incubation bed for secondary organisms. Some of these suffer at the time frank gonorrheal rheumatism, monarticular, severe, and disabling. Others recover and go along for some years apparently well, then develop multiarticular lesions of less severity. Pemberton states that the greatest incidence of arthritis in men is between the ages of 36 to 46, which fairly well accords with this class. Among the older men, Young and Hill have found that 70% of all prostates are infected. 42% of these were infected with staphylococci, 20% with B. Coli, 5% with streptococci, 1% with gonococci, and 2% with other organisms. This certainly accords with my own experience, for I find pus in the majority of prostatic smears taken from men past 40. I do not mean to say that every man who develops infection in his prostate has had gonorrhea, for such is not true. There are other causes of infection such as obstruction, congenital deformities, constitutional diseases etc.

Considering the question of infection as a single process, regardless of the type of organism, the invasion usually takes the following form: the portion of the prostate nearest the urethra is first involved, producing a periurethral prostatitis. This is mild in nature and always occurs when gonorrhea extends to the posterior urethra. It usually subsides fairly promptly and leaves slight traces afterward. It may, however, from trauma, strong drugs, drinking alcohol, exposure, heavy exercise, or sexual abuse, extend further into the gland and involve all of it, sometimes even causing a pelvic cellulitis around the entire neck of the bladder. Such an extension is almost always accompanied by an extension into the seminal vesicles and ampullae of the vasa deferentia—which is a region very difficult to drain, treat, or even diagnose. The prostate is like a sponge, and has many openings into the urethra, hence is fairly easily drained and cured; but the seminal vesicles are like sacs or long tubes, folded on themselves and almost impossible to drain even surgically, much less by massage. If we remember that the ejaculatory duct passes directly through the prostate, it is perfectly easy to see that when the prostate is swollen the seminal vesicle cannot empty, no matter how much massaging we do, because the duct is squeezed off by the edematous gland. Under such circumstances something is bound to develop, and the commonest thing is rheumatism. After the prostatic swelling is gone, the vesicle still cannot empty, because the long continued harboring of infection has left its walls stiff and fibrosed so that their peristaltic action is greatly interfered with if not stopped entirely. I recently had a case where the vesicle filled up and formed an abscess as large as a baby's head, filling the entire pelvis and pointing in the midline above the symphysis. I drained it extraperitoneally, but the sepsis was so great that the patient died. For two weeks he had been in the hospital, very septic, but with no possibility of a diagnosis because his lesion was entirely out of reach of any method of examination we now know. Finally when the swelling reached forward and became visible and palpable we attacked it. That patient undoubtedly had suffered a chronic infection for years without knowing it.

The prognosis in cases of infection in this area is quite good if modern methods are followed. Gonorrhea is ordinarily a self limited disease and responds nicely to treatment without trauma. When it gets into the prostate and vesicles it naturally takes longer to get well, because such immunity as develops and finally kills it out is a tissue immunity and not a general bodily immunity. In other words the urethra can be getting well when a brand new process is just starting in the seminal vesicles, which in turn must build up a resistance and throw off the infection. It can be done, however, and ordinarily is done in from eight to sixteen weeks. Patients who have cooperated and who have been properly managed will at this time be entirely free of gonococci, though the organs are always left scarred and fibrosed, so that catarrhal infections can easily come in and remain during the balance of the patient's lifetime. Getting rid of such secondary infections and staying rid of them is very difficult under ordinary methods of treatment, which again accords nicely with the prognosis in chronic arthritis. We can in all instances rid the patient completely of his infection if we can be radical enough, but conservative doctors dislike to urge a severe operation

without knowing for certain that it will cure the disease.

The methods which are advocated by the best authorities today are as follows: first, a course of massages, carried out thoroughly about every three days, and accompanied by a deep injection of 5% argyrol or similar drug. This massage should be done before the patient urinates, and the drug should be injected after he urinates. Such treatment should be accompanied by an injection of .6 gms. neosalvarsan or sulpharsphenamine every five days intravenously for about six doses. If these measures do not suffice, the arsenicals should be supplanted by 1% mercurochrome, giving not more than 4 or 5 c.c. at each dose, and giving it every other day. If the patient is still not well, vasotomy should be done injecting the drug directly into the vesicles through the vas deferens. Finally, if all else fails and the disease is severe enough, we can do a radical excision of the vesicles through the perineum. Morissey has reported excellent results in desperate cases by this method.

Summarizing this matter, I would say that from the experience I have had in treating patients for various conditions caused by focal infection, from figures given by different observers, and from a series of fifty cases recently studied in University Hospital, it is my judgment that infections of the urinary tract are much more frequent and damaging than are generally supposed. The peculiar anatomy of this region renders it very difficult to diagnose the infection unless careful and thorough methods are followed. Treatment is equally tedious and difficult, requiring care and expert procedures, sometimes major operations. If such care is had, however, the prognosis is good for eradication of the focus.

CYSTS OF THE UPPER ABDOMEN WITH SPECIAL REFERENCE TO SOME POINTS IN DIFFERENTIAL DIAGNOSIS

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Early in his career the medical student is told—"always think first of the most common condition when arriving at a diagnosis." Certainly no advice is more prudent than this, it is inevitably an excellent rule. The physician must not, however, think so consistently of the common conditions that he forgets the existence of certain rareties, especially those conditions which are seen frequently in a large series of cases. Undoubtedly the popularization of the term "surgical abdomen," looked upon as a subject for socalled "laparotomy," has produced in no small way an obstruction to accurate diagnosis. It offers the surgeon, more particularly a fortification behind which lethargic tendencies may have a large range. In the end however, the patient and not the surgeon is the loser. One cannot possibly question the benefits to be derived from accurate diagnosis before surgery is resorted to. Unfortunately there are many cases which cannot be accurately diagnosed preceding surgery, at the same time we must concede that these cases are multiplied many fold by this barrier of exposure. Consequently many exploratory operations are done, the abdomen being opened with little thought having been given to the probable conditions found therein, and oft times the surgeon is more or less startled by the condition found, being unable to take care of the situation as intelligently as he might have, had his preoperative diagnosis been more complete.

There are a group of pathological conditions found in the abdomen which are not infrequently a surprise to the operator. These conditions are frequently inaccurately diagnosed before surgery.

These cysts of the upper abdomen are seen rather consistently in a large surgical service. The history usually is that of an acute onset, the primary pathology being masked by these acute symptoms to such a degree that the characteristic chronicity is overlooked. For this reason these conditions are frequently found as a surprise to the operator. I have as a basis for this belief several case reports as well as personal experiences.

CYSTS OF THE PANCREAS

The pancreas is oblong and flattened, it is situated transversally across the posterior wall of the abdomen, at the back of the epigastric and either hypochondriac area. It is six to ten inches in length.

Cysts of the pancreas have been variously classified. They are perhaps more simply conceived by classification according to etiology, and spoken of as:

1. Congenital.
2. Traumatic.
3. Inflammatory.

Congenital cysts of the pancreas are seldom seen but do occur, usually congruent with malformation of the pancreatic ducts.

Probably most pancreatic cysts are a direct result of trauma, usually giving a history of having received a blow in the upper abdomen, this blow being followed by symptoms of pain and swelling in this region.

Other cysts of the pancreas seen, occur usually in adult life and give no history of trauma but a history congruent with that of attacks of acute or chronic pancreatitis.

Although yielding no pathognomonic signs or symptoms there are certain points more or less characteristic of cysts of the pancreas which aid materially in differential diagnosis. As a cyst increases in size it usually pushes the transverse colon downward and the stomach up and to the right upper abdominal quadrant. The normal position of the gland is posterior to and between these two structures. As a consequence we see a mass in the upper abdomen between the xiphoid and the umbilicus. This mass is tense and cystic, it is relatively immobile. Pain is a constant accompinant, in most of the cases with acute exacerbations.

In a few cases diabetes mellitus is associated, but this is not usually the rule. The stools are large, evidencing reduction in utilization characterized by the proper function of pancreatic ferment. Undigested muscular fibers are numerous. Diastatic ferment is found in urine, according to Wohlgemuth-Noguchi method.

CYSTS OF THE SPLEEN

The spleen is flattened and oblong, it possesses a brittle consistency but is soft to touch. It is extremely vascular and located in the left hypo-chondriac region. Its external surface is convex while the internal surface is slightly concave. Its upper end contacts the diaphragm, while its lower end contacts the left extremity of the transverse arch of the colon. The anterior margin is free, notched and rounded. The posterior margin contacts and is connected with the superficial layers of the left kidney.

Virtually everyone who has written on the subject has given a different classification of these cysts. A simple classification is as follows.

1. Traumatiic cysts: These cysts contain a variable amount of bloody fluid, caused primarily perhaps, by a blow or series of bruises to the splenic substance.

2. Lymph cysts: This group of splenic cysts comprises those produced by an obstruction to the lymphatic circulatory mechanism. Some authors have denied existence of lymphatics with the spleen, based on microscopic study. The general concensus of opinion however, is contrary to this belief.

3. Peritoneal cysts: or those classified by Fowler as infoliation cysts, having enclosed peritoneal epithelium.

4. Neoplastic cysts: which includes those conditions explained on no other basis except that due to a structural or developmental malformation. This heading includes the very few dermoid cysts which have been described.

5. Parasitic cysts: caused by a bacteria or plasmodic invasion, including ingestion of typhoid, para-typhoid, malaria and ecchinococcus.

There is usually little cause for improper diagnosis in these cases. Occasionally thought of an omental or mesenteric cyst may deny a positive conclusion. The position of the cyst is more consistent, its location being in the left hypochondriac area. The size is of course variable. Anatomical relationships infrequently com-

plicate other tumors. Due to inadequate knowledge of the true function of the spleen, laboratory findings are of little consequence in diagnosis. It suffices to say that differentiation of the cyst from other tumors of the spleen is made simpler by ruling out the lukemias with proper blood analysis.

MESENTERIC CYSTS

The mesenteries may be divided into the following groups:

1. Mesentery proper.
2. Mesocaecal mesentery.
3. The ascending, transverse and descending mesocolons.
4. The sigmoid mesocolon.
5. The mesorectum.

The mesentery proper is that fold of peritoneum which connects the convolutions of the jejunum and ileum with the posterior wall of the abdomen. Its root is about six inches in length and directed obliquely from the left side of the second lumbar vertebrae to the right scaro-iliac symphysis.

The mesocaecum connects the caecum with the right ilac fossa.

The ascending mesocolon connects the back part of the ascending colon to the posterior abdominal wall. The descending mesocolon connects the back part of the desending colon to the posterior abdominal wall, while the transverse mesocolon connects the transverse colon to the posterior abdominal wall.

The sigmoid mesocolon connects the sigmoid flexture to the left iliac fossa. The mesocrectum connects the upper part of the rectum to the front sacrum.

Obviously cysts of the mesentery may possibly arise from any part of the mesenteric folds of the peritoneum. Actually most of these cysts arise from the mesentery proper or the mesocaecum. Consequently the tumor mass is usually seen to the right side of the midline of the abdomen, extending from McBurney's point to the upper hypochondriac region. These cysts might be conveniently classified as follows:

1. Chylous cysts.
2. Traumatic cysts.
3. Cysts precipitated by chronic. inflammation.

Of these the chylous cysts or the chylo-hemorrhagic cysts predominate. These cysts are large and usually singular. They may occur multilocular. They are intra-peritoneal, usually contain clear fluid, They are composed of fibrous tissue and according to Klemm and Rittner should be classified as cystic lymph-angiomias.

The mesenteric cysts, due to trauma, usually follow a history of trauma to the abdomen, these cysts contain dark red fluid.

The mesenteric cysts, due to inflammation, occur after a chronic inflammatory process has existed for some time. They are filled with a sero-sanguineous fluid caused by constant friction within a slow forming cystic sac.

These patients usually come to the physician's attention not because of any tumor, but because of acute symptoms of pain or partial intestinal obstruction. Most frequently they are diagnosed as an acute or chronic appendicitis, due to their location and these acute symptoms. The enlargement is mistaken for peritonitis or some other form of inflammatory reaction and the physical findings are usually accompanied by elevation of temperature, leukocytosis and fast pulse.

Work done by Bartlett points to the fact that these cysts probably arise from the primitive sex organs, the Wolffian bodies.

OMENTAL CYSTS

The omenta are composed of the greater omentum, the lesser omentum and the gastro-splenic omentum.

The greater omentum consists of four anatomical layers: two of these arising from the stomach, one from the anterior margin, the other from the posterior border. These two layers descend after fusion, to the pelvis blanketing, as it were, the small intestines. The structure then turns upon itself and ascends to the transverse colon, which organ it encloses.

The lesser omentum extends between the transverse fissure of the liver to the lesser curvature of the stomach. It is extremely thin and consists of two peritoneal layers.

The gastro-splenic omentum is a fold of peritoneum which connects the concave surface of the spleen with the cul-de-sac of the stomach, it is continuous with the great omentum.

Most of the omental cysts arise within

the cavity of the greater omentum. They may be classified as follows:

1. Embryonic cysts.
2. Traumatic cysts.
3. Inflammatory cysts—the endothelioma of the two surfaces fusing because of chronic inflammation.

The embryonic cysts arise here under similar circumstances as mentioned in relation to other traumatic cysts, the original factor concerned being a hematoma.

The inflammatory cysts of the omentum are probably produced by friction between the endothelial surfaces of the omental sac producing or following inflammation.

Omental cysts vary in size from a small cyst to others of huge size. Their position is usually in the mid abdomen or in the right abdomen. One usually elicits the history that a large abdomen is natural for the patient. In most cases they come in following acute symptoms.

The following case history operated by the writer is of interest:

W. M., a male of German descent, aged seventeen years. A long distance call came from his sister in a neighboring town was to the effect that her brother had been taken with appendicitis. The local doctor insisted upon immediate surgery. We were informed that the patient would arrive at the hospital in about two hours.

The patient presented himself. Chief complaint was pain in the abdomen. The history was that he retired to his bed the evening before after having ingested a very large dinner. (His appetite had always been ravenous). Upon retiring he felt quite well, but was wakened about 4:00 a. m., with much pain in the abdomen. The pain localized over McBurney's point.

The family history is that the father died at the age of fifty with carcinoma of the bladder. A sister living, has congenital malformation of the entire spine, the vertebrae being of different sizes and shapes with a very marked scoliosis.

Physical examination showed a very well developed seventeen year old boy. The head, neck, nose, throat, eyes and ears all negative to external examination. The chest and heart revealed no pathology. The abdomen was large, the enlargement being perfectly uniform throughout. There was a dull precussion note throughout. There were no palpable masses, no shifting dullness or tumor mass perceived. The right rectus muscle was rigid from its origin to its insertion. The abdomen was considerably distended.

Pulse 100, respiration 28, temperature 38°C. White blood count 12,000, 82% polyneuclear cells. Red blood count 4,500,000. Haemoglobin 90%. Uurine negative.

While we were cognizant of the potentialities of a cystic tumor our inclination was to consider an inflammatory intra-abdominal condition with much suspicion toward the appendix.

The abdomen was opened by a long right rectus incision. There was considerable free, clear fluid in the peritoneal cavity.

The entire abdominal cavity was filled with a huge cyst, conservatively the size of a seven months pregnant uterus. This cyst completely blanketed the entire intra-abdominal viscera. The walls of the cyst were very thick and tenacious. There were no adhesions between the cystic wall and the parietal peritoneum of the abdominal wall. No strands of omentum were to be found. The cyst extended from the diaphragm above to the pelvic floor below. It was not connected gith the bladder, gall-bladder, either kidney or ureter. It did not arise from the spleen nor the pancreas nor the liver. The posterior wall of the cyst was made up of the anterior surface of the loops of the small intestines and the colon. It was firmly attached to all of these underlying structures, its blood supply being also the blood supply of this viscera. It was soon sensed that complete extirpation of the cyst was impossible. The wall was sutured to the peritoneum as in colostomy, then the cyst was opened and 3200 c.c. of dark red fluid allowed to drain out, 800 c.c.'s of fluid escaped through the drainage tube in the next few hours. The post-operative course was uneventful. The sinus was kept open for six weeks but drained very little. At the end of this time it was allowed to close. So far as we can ascertain the cyst is not refilling.

This case was evidently an omental cyst, probably of embryonal origin.

MALFORMATIONS OF THE UTERUS AND VAGINA—REPORT OF A CASE*

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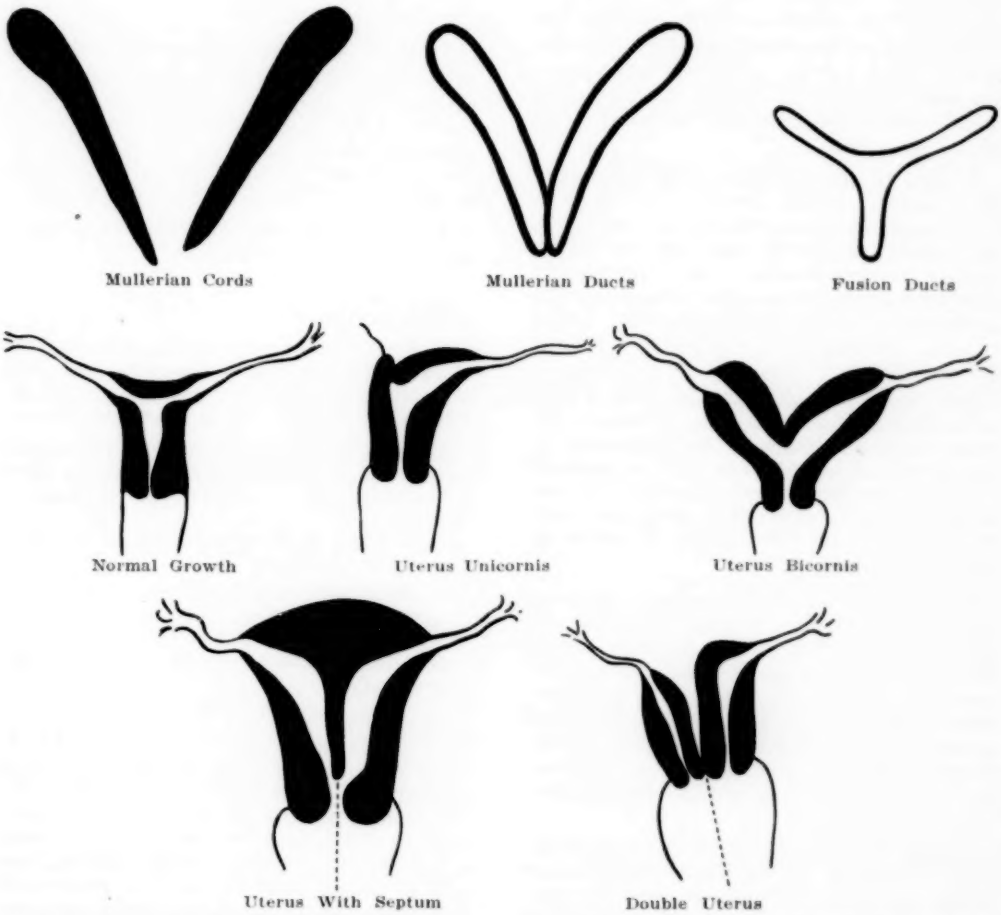

In this discussion of the various malformations of the uterus and vagina a review of the points in development will help to clarify the way in which malformations are brought about. Malformations are errors in development. This may be simply an arrest in development or it may grow the wrong way.

The first structures indicative of the genito-urinary organs to appear are the Wolffian ducts. These appear about the fifteenth day of fetal life, followed in about three days by the Wolffian bodies. One of each of these bodies and ducts lies on either side of the median line. During the fourth week another duct appears near the Wolffian body of each side. These are the Mullerian cords or ducts. These Mullerian ducts form the future fallopian tubes, uterus and vagina of the female or

*Read before Muskogee County Medical Society 1932.

the excretory ducts of the female. In the male the Wolffian ducts form the excretory ducts of the genital apparatus—the vas deferens and the epididymis. *The Mullerian ducts in the male become atrophic as do the Wolffian ducts in the female.* In the male the ends alone of the Mullerian ducts remain. The outer end forms the "hydatid of morgagni" closely connected with the epididymis and the inner end forms the "sinus pocularis" or "uterus masculinis" opening into the prostatic portion of the urethra. In the female the upper part of the Wolffian ducts remain as the "head tubule" of the parovarium—the lower portion is known as "Gartner's duct." They are atrophic structures of little importance.

A part of the Woffian body forms the genital gland of that side i.e., the ovary in the female and the testis in the male. At the end of the fourth week genital ridges appear as outhgrowths from the middle part of each Wolffian body. These are the earliest traces of the genital glands. There is some question as to the exact time that differentiation in sex can be determined. Usually between the fifth and sixth weeks a difference is noted. The primitive female gland possesses a large number of the primitive sexual cells with a predomination of the large primitive ova. In the male there is a formation of a net work of cell cords—the forerunner of the seminiferous tubules.

From the diagrams here shown the part played by the Mullerian ducts can be easily seen. The lower portions fuse and form the vagina and uterus and the upper parts remain separated to form the fallopian tubes. The lower end of the canal formed by this fusion is the future vagina and is closed. The fact that it is closed is seen later in the condition spoken of as imperforate hymen.

About the fifth month there is considerable thickening in the upper part of the canal—the growth of the uterus. At first the upper portion is bifurcated and forms the two horns between which the fundus is subsequently developed.

At the end of the third month the external sexual organs are characteristic beyond doubt. Up to the sixth week the external opening of the intestine and of the urinary apparatus are received within a common cloacal recess. The vestibule is formed from the cloaca or common opening of the two tracts. The perineum developing separates the rectum from the common vestibule. The lower end of the Mullerian duct (hymen) breaks down, opening the vagina into this vestibule. This opening varies in size, shape and position giving the various forms of openings found in the hymen.

The common anomolies of development are as follows:

1. Failure of the septum between the embryonic vagina and sinus urogenitalis to break down results in imperforate hymen.

2. More rarely perfect canalization does not take place in the fused Mullerian cords, results in a closed place at some point in the canal-giving atresia of the vagina and atresia of the cervix. In rare instances all the lower end of the fused cord fails to canalize—causing absence of the vagina.

3. *Septum lacking between the urethra and vagina or hypospadias.*

4. Persistance of the septum causing double vagina and uterus septus.

5. Failure of fusion of the mid portion of the ducts causing each individual duct to form a uterus and vagina. Uterus didelphus or double uterus. Septate vagina.

6. Arrest of development of the upper end of one Mullerian duct resulting in a uterus with one horn. Uterus unicornis.

7. *Failure of development of the fundus. Uterus bicornis.*

8. *Hermaphrodite.*

9. Pseudohermaphrodite.

10. Rudimentary, fetal, infantile and puerile uteri.

The case I want to report is that of a 15 year old girl who was brought to the hospital suffering with recurrent attacks of pain in the right lower quadrant of the abdomen, and having one of the so-called attacks at the time of admission. She was a rather large girl for her age and had begun to menstruate six months previously with pain and discomfort in the lower right abdomen with each menstrual cycle. Menstrual flow of bright red blood but small in quantity and lasting about six days. No intermenstrual bleeding. Each succeeding period was worse than the preceding one and each caused a sense of fullness in the lower abdomen.

The present attack began forty-eight hours previously with pain in the right side—persistent, but without nausea or vomiting. Temperature 100, pulse 120,

white cells 9100 with 69% polys. Catheterized urine was negative. The physical findings showed a well developed and well nourished young female lying flat in bed but restless and complaining of distress in the right side of the abdomen. Skin and body fat normal. Breast development and distribution of hair normal. Menstruation present. The examination essentially negative except for the marked muscular rigidity and tenderness in the lower abdomen—more marked on the right side. With temperature 100, pulse 120 and the extreme tenderness and persistent pain in the right side a diagnosis of acute appendicitis was made and an immediate operation decided upon. No rectal or vaginal examination was done prior to operation. On opening the abdomen under ethylene anesthesia and through a right rectus incision much free blood and a few clots were encountered. The mass in the right side of the pelvis which was at first thought to be an ectopic pregnancy proved to be the right half of a bifid uterus with a distended right tube. This tube was emptying blood into the abdominal cavity. The other uterus was larger and the tube was not distended. The bodies of the two uteri were quite close together but the right side was removed without difficulty, doing a supravaginal hysterectomy on the smaller right uterus. At this stage a vaginal exploration was done. The anterior vaginal wall was boggy and resembled a cystocele. The vagina was extra long and in the upper portion was a small fistulous tract which led upward into that portion of the uterus which had been removed. There was a very imperfect cervix surrounding this opening. The boggy mass lying in front of the anterior wall was incised with the escape of a large amount of dark blood. The abdomen was closed after the removal of an appendix secondarily involved with organized blood clot. Further exploration revealed that within this second vagina there was a perfectly formed cervix. The incision was enlarged and the opening held open with a rubber tube sewed in place and the patient returned to bed. After an uneventful nine day convalescence a second operation was done. At this time the walls of the septum were separated and sutured and the upper ends sutured around the cervix. At discharge the wound had healed leaving a somewhat irregular vaginal wall but with no obstruction to the cervix attached to the left uterus and tube. The patient was seen once two months later, having had two normal menstrual periods and the vaginal examination showed a perfectly satisfactory canal.

The diagnoses possible in this case then are as follows:

1. Double uterus.
2. Double vagina.
3. Hematocolpos.
4. Imperforate hymen, one vagina.
5. Hematometria—double.
6. Hematosalpinx—right.
7. Sub-acute appendicitis.

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POUCHES OF PHARYNX AND ESOPHAGUS

A. S. MacMillan, Boston (Journal A. M. A., March 19, 1932), reviews the literature on diverticula of the pharynx and esophagus, mentions their probable mode of development, calls attention to the frequency of their occurrence, discusses their diagnosis and differential diagnosis, and adds an additional twenty-three cases as studied in the Esophageal Clinic at the Massachusetts Eye and Ear Infirmary. In a careful examination of 1,000 cases of dysphagia he showed that pharyngeal pouches were the cause of about 2 per cent and esophageal pouches less than 1 per cent. On the basis of his observations he concludes that symptoms which are not always characterized, vary with the size. A roentgen examination is the only means of differentiating between pharyngeal pouches and other lesions of the upper end of the esophagus. Esophageal pouches are very commonly found at autopsy. Surgical removal of pharyngeal pouches by the two-stage operation has proven to be the safest and most satisfactory procedure. Surgical treatment of esophageal pouches presents the same difficulties encountered in all esophageal surgery.

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SENSITIZATION DERMATOSES OF NONFUNGOUS NATURE FOLLOWING SUPERFICIAL FUNGOUS INFECTIONS ("RINGWORM") OF EXTREMITIES

According to Cleveland White and Samuel J. Taub, Chicago (Journal A.M.A., Feb. 13, 1932), superficial fungous infections (ringworm) of the extremities and elsewhere may be followed by secondary sensitization dermatoses of nonfungous nature. Such dermatoses may be confused with dermatophytid eruptions; future studies may show that some may be a part of a dermatophytid as at present conceived. Detailed individual study and properly performed sensitization skin tests usually will discover the offending substances. Four illustrative cases are cited; an insufficient number of cases has been studied to incriminate any specific organism or any particular class of proteins or substances.

HODGKIN'S DISEASE—REPORT OF CASE*

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White, male, age 31, Banker. August, 1929.

Chief complaint: Rightside paralysis, involving both right arm and leg.

Family and past history, negative.

Present history: Three weeks ago patient became unconscious for four or five days and became paralyzed in right arm and leg, at which time his doctor did a spinal puncture and found a 4 plus Wassermann. The blood Wassermann at that time was negative. Following this patient had six treatments of salvarsan and six mercury injections with improvement. Patient uses alcohol to excess and assigns no reason for this.

Physical Examination: Reflexes deep and superficial or exaggerated. Station is normal. Babinski, Chaddock, Rhomberg, Oppenheim, and Gorden signs are all negative. No ankle or patella clonus. Slight speech defect. Slight tremor of extended fingers. Pupils are regular and react to light accommodation. No generalized adenopathy. Heart normal. Blood 116-80. Lungs normal. Abdomen, liver and spleen not palpable. Reflexes at knee; right, hyper-active; left normal: Blood Wassermann negative. Spinal fluid shows globulin and mastic negative with 10 cells per cubic centimeter. Wassermann 1 plus. Urine negative. Temperature, pulse and respiration normal.

Diagnosis. CNS lues.

JULY, 1931

Complaint: Swelling of glands of neck and sore throat, nervousness.

Examination: Temperature 102.6, pulse 136, respiration 28, weight 109, usual weight 136; height 5 feet 6 inches. Examination is same as before except for the following: Shows a discrete enlargement of the glands of the left sub-maxillary and cervical regions. No axillary or inguinal enlargement. Chest normal to physical examination and X-ray. Reflexes: eyes are normal. Rhomberg positive. Blood Wassermann negative. WBC 14,200. Poly 82%. Small mononuclear 10%, large mononuclear coagulation times three and one-half minutes. RBC 3,470,000. Hgbn. 55%, color index 80. There is poly and anisocytosis. Urine and sputum normal. Biopsy on the cervical glands showed Hodgkin's disease. Patient was then given a course of X-ray treatments which resulted in disappearance of the adenopathy.

DECEMBER, 1931

Glands of the neck and sub-maxillary are not palpable. Temperature normal. Lungs and heart normal. Abdomen: Liver is three finger-breadths below the costal margin and is tender; spleen not palpable. Blood Wassermann is negative. The R.B.C. are 2,980,000. W.B.C. 6,800. The poly count is 20%. Hgbn. ks. 45%, color index is 77. There is considerable polychromophilia and poikilo and anisocytosis present. Skin shows considerable lichenification.

Diagnosis: Cirrhosis of the liver. Hodgkin's disease. C.N.S. lues.

JANUARY, 1932

Temperature: 97. Pulse 108. Respiration 22. Head, neck and chest are normal. Abdomen greatly distended and tympanitic, right side of abdomen is tender and resistant, down to the umbilicus area. Abdomen is too tense to feel liver or spleen. No adenopathy. Urine and sputum negative.

Autopsy: February 3, 1932, shows ascites of the abdomen, pericardial effusion, bilateral pleuritic effusion, fatty degeneration of liver and areas of Hodgkin's disease in liver, spleen, prostate, kidney, lung and retro-peritoneal glands.

DISCUSSION

Hodgkin's disease is variously called lympho granulomatosis, pseudoleukemia, lymphosarcoma (Virchow's), malignant lymphoma (Billroth), splenic anemia (Strumpell), chronic relapsing fever (Epstein, multiple myelomata (Rusticky), lymph adenoma (Wunderlich), and anemia lymphatica (Wilks). All the terms go to show the confusion encountered in

*Read before the Muskogee County Medical Society, March 8, 1932.

arriving at its classification. This confusion is justified, for the disease has characteristics which all the foregoing terminology seeks to express, and in fact is the battle ground of whether Hodgkin's disease is an infection or a malignancy.

It was in 1832, just one century ago, that Hodgkin first described the disease so well that it has since born his name. It is characterized by a dyscrasia of the blood which we call progressive secondary anemia, as well as an adenopathy, and little or no leucocytosis, while clinically there is in most cases, a somewhat characteristic temperature curve of the Pel-Ebstein type, in which the febrile period lasts about a week, followed by an apyrexia of ten days to two weeks.

Sternberg in 1898 stated that the disease was a special glandular form of tuberculosis, on the strength of clinically finding the two quite often associated. But four years later Dorothy Reed (John Hopkins) and Longscope at the University of Pennsylvania Hospital both showed that tuberculosis and Hodgkin's were separate affections.

Froaenkel and Much in 1910 found an organism greatly resembling the tubercular bacillus in 12 of 13 Hodgkin cases. These patients were clinically and anatomically free of tuberculosis. The organism was found to differ from the tubercle bacillus in not being acid fast. In 1913 the observations were confirmed by Negri and Miermet, who stated the organism was very similar to the tubercle bacillus, but in reality was a diphtheroid. In the same year Bunting and Yates again confirmed these findings and conclusions.

Billings and Rosenau in the same year reproduced Hodgkin's disease in monkeys by innoculation of this organism, and the typical proliferation of the endothelial cells, stroma, giant cells and eosinophilia and plasma cells in the lymph nodes. Nevertheless Oliver contends the malady is a neoplastic one, because of its similarity in histological appearance, its occasional invasion of capsule and veins and ultimate true metastases, and further states that diphtheroid organisms have been found in many other conditions and even in normal lymph nodes.

Physical examination at first discloses little. The sub-maxillary group of glands are most frequently found to be discretely and painlessly enlarged, then usually from these a general adenopathy develops. Any group of glands however, may be the starting point. As variable periods of weeks, months or years go by, there comes malaise, anemia, cachexia and fever of 100 to 103, which may be intermittent, remissive, but usually recurrent in type. This latter form has gathered the name of Pel-Ebstein pyrexia.

At any time during the course cutaneous signs may be present, including urticaria, petechiae, papular-prurigo-exanthemata, edema or bronze pigmentation.

The liver and spleen often are moderately and painlessly enlarged from metastatic areas and local symptoms in any part of the body may develop from pressure of the enlarged glands on structures as arteries, nerves, veins or various organs.

The blood shows nothing characteristic, except it is consistently of progressive secondary anemia type. Lymphocytes may be relatively increased but never has a transformation to a leukemia been recorded. In cases showing pronounced skin irritation, an eosinophilia may be present, but the blood remains true to the secondary group.

Only by a biopsy can the disease be diagnosed. This shows typical fiindings in the appearance and arrangement of the fibrosis, lymphocytes, giant cells, endothelial, plasma and occasionally esinophilic cells.

However the disease may be suspected by the painless, discrete, progressive adenopathy and absence of leukemic changes in the blood.

Lymphosarcomas, tubercular g l a n d s, syphilis, secondary infections invading glands, trauma, to regional glands, and metastases of malignancy to lymph glands all have to be considered, and ruled out in considering Hodgkin's disease, but the biopsy takes care of the doubt in each instance. The size nor resistance of the palpable glands cannot be relied upon, for these factors vary with the pathological stage of the disease.

Death usually occurs under two years, though some go as long as five years, while others close the process in death during a few weeks or months.

Treatment is to no permanent end, and X-ray, arsphenamines, elimination of foci, diets and drugs only add to the peace of the encumbered during his spiritual metamorphosis, as he embraces another world.

GLOSSOPHARYNGEAL NEURALGIA WITH A CASE REPORT

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TULSA

A rather exhaustive survey of the literature in English of this condition revealed previous reports on it totalling only thirty-six cases. Based on this alone one might be led to the conclusion that the condition is an extremely rare one but careful study of these reports warrants the belief that many cases have been unrecognized and it is no doubt also true that numerous cases have not been reported.

No disease or, rather, pain syndrome illustrates more beautifully the fact that even so-called modern medicine is in a constant state of evolution. With the knowledge of anatomy upon which we have prided ourselves for many years it seems scarcely conceivable that the definite entity of idiopathic glossopharyngeal neuralgia should have failed of recognition until Sicard and Robineau[1] in 1920, reported three cases and even then, they believed that the vagus and superior cervical sympathetic nerves were involved. However, the condition being a rare one and the entity of trigeminal neuralgia being so firmly entrenched in the medical mind following Fothergill's[2] classic description of it, we can scarcely wonder that the pain of glossopharyngeal neuralgia was thought to be an atypical expression of trigeminal "tic douloureux." Weisenburg[3] in 1910, had really opened the way for the recognition of the condition when he described in detail the symptoms of irritation of the ninth nerve. It is not our purpose, however, to enter upon a detailed historical study as Adson,[4] Dandy,[5] Stookey[6] and others have done that admirably. These writers have also described and discussed the anatomy and embryology[4] of the nerve exhaustively.

The etiology of this neuralgia remains a matter for conjecture as does that of trigeminal neuralgia. Focal infections of the teeth, tonsils, ears, mastoids and sinuses have been regarded as causative. Unfortunately, while some cases have apparently improved after removal of infected tonsils, etc., recurrence has been the universal rule so that the role played by focal infection has not been properly evaluated.

Analysis of the reported cases discloses these facts: Twenty-eight cases seemed to be idiopathic in origin as no general or special examination accounted for their causation. Of these, eight revealed at operation no intracranial pathology to explain the symptoms. There were five cases in which the tongue, pharynx, or larynx were involved by carcinomata. In one case (Weisenburg's) a brain tumor of the cerebellopontine angle, stretching the ninth and tenth nerves and compressing the fifth was found. Two cases were doubtful in that one had repeated convulsions and died two years after onset of symptoms and the second lost weight rapidly and became cachectic before death. Unfortunately autopsy was not obtained in either case. Adding our own case which is apparently idiopathic, there are 29 of no known etiology and six of proven etiology. Omitting the two doubtful cases, we find 20% occasioned by tumor growths either in the region supplied by the nerve or intracranially.

Of the total number of cases, (including our own, a female) there were thirteen females and twenty-four males afflicted. This might be explained on the basis of greater frequency of mouth and throat malignancy in men—four of the five cases with this etiology being men and one a woman. However, considering only the idiopathic cases we have twelve female cases compared with twenty male. This series is, of course, entirely too small to permit of any conclusion being drawn beyond a statement that there seems to be a greater tendency toward development of the syndrome by men.

Glancing at the age in the thirty-one cases in which it was recorded (our's included) the preponderance occur between fifty and seventy years, there being nineteen during this period as compared with

eleven cases between twenty and fifty years and three after seventy years.

The symptomatology is very exact and definite and the diagnosis can be based accurately upon it alone. The pain is paroxysmal, its character is variously described as lancinating, stabbing, shooting, like thrusts of a hot iron, etc., just as in trigeminal neuralgia. The *duration* varies from a second or fraction thereof, to nearly a minute, very rarely longer. The *distribution* is pathognomonic in that always some part of the glossopharyngeal sensory area is struck—as the tonsil, root of the tongue or pharynx—occasionally the ear lobule. Radiation occurs most frequently into the ear, down into the neck, at times to the angle or back of the mandible or external auditory meatus. We must at times interpret some of the radiation as an "overflow" or reference of the painful sensation to other nerves. *The exciting causes* are distinctive. Swallowing, particularly of liquids, talking, chewing, or yawning are given most frequently as the immediate cause of pain. At times coughing, sneezing, excitement, muscular exertion, touching or washing the ear has induced pain and often it is apparently spontaneous. In many cases a "trigger zone" can be identified, stimulation of which produces pain and this has most frequently been in the tonsillar region, base of the tongue, or on the pharyngeal wall. Conversely, cocainization of this "zone" will stop the attacks of pain temporarily.

Diagnosis can usually be made from an intelligent account of the symptoms alone. The exact similarity to the spasm of pain in trigeminal "tic douloureux" *except for location*, the distribution and radiation and the exciting causes establish the diagnosis and this , of course, is clinched when a typical "trigger area" can be found. There should be no difficulty in differentiating it from trigeminal neuralgia on the basis of distribution, exciting causes, and "trigger zones" if present. If possible the pain is more severe than that of trigeminal neuralgia but usually of shorter duration. Like ectopic pregnancy it can be diagnosed easily if it is kept in mind. Unfortunately text books contain little or no reference to the syndrome so that until recently its very possibility was generally unknown, and is still to a great extent, in general medicine.

A word of warning might be timely with reference to atypical and bizarre types of discomfort or pain along the distribution of the glossopharyngeal nerve. It is being recognized more clearly with the passage of time that all pains in the trigeminal area are not true "tic douloureux." Unfortunately, many cases have had alcohol injections, avulsions, and posterior root sections of the trigeminus with no relief and the superimposition of the disability occasioned by destruction of the trigeminus sensory function. Atypical pains are now recognized in many instances as migrainous in origin and we have realized that radical procedures are justifiable only when a clear cut picture is presented. Parker[1] and others have called attention to this so we should be eager and able to avoid useless operations on the glossopharyngeal nerve by demanding a definitely recognized syndrome before undertaking surgery. While the removal of focal infections has not been attended by success in relieving the condition, as a matter of good practice such infections should receive proper attention. However, the patient should be made to understand that in all probability no relief from the neuralgia will be obtained, only a better safeguarding of general health secured. The longest remission occurring in any case reported was three and three-fourths years (one of Adson's cases). Some cases have had immediate relief following tonsillectomy, etc., but there was always recurrence of pain in the course of time.

Surgical treatment, however, is most satisfactory and, in skilled hands, comparatively free from danger. Just as in the treatment of trigeminal neuralgia, intracranial section has proved the most satisfactory from the standpoint of permanent relief and freedom from complications and untoward results. Treatment evolved for ninth nerve neuralgia, much as for that of the fifth nerve, from the original peripheral avulsion of the glossopharyngeal, pharyngeal branches of the vagus, and superior cervical sympathetic nerves as practiced by Sicard and Robineau through the principles of intracranial section evolved on the cadaver by Adson and Fay[2] to the actual practicing and development of intracranial section through a suboccipital approach of Dandy, Stookey and others. Their papers give detailed accounts of their method of intracranial section. Apparently only one man, Harris, dared attempt alcoholic injection, and he was unsuccessful. The anatomical relations of the nerve make any attempt at its injection chimerical. Dandy[3], Stookey[4],

Bailey[8] and Reichert[10] have reported eight cases effectually relieved by intracranial section with no mortality.

Following operation the result is much more satisfactory than that of section of the sensory root of the trigeminus in that while the pain is completely relieved the loss of sensation is limited to areas in which it is not noted nearly as markedly is in those areas supplied by the fifth. The motor impairment is negligible. Dandy and Stookey have carefully tested the changes in a motor, sensory, secretory, and taste sense way and while they are not in exact agreement they have established the following facts:

Motor Changes: Limited to a slight difficulty in swallowing solid food for a few days after section, soon disappearing. No deviation of pharyngeal wall; lowering of palatal arch on side of operation as seen by sagging while at rest but voluntary elevation of the arch remains equal on both sides.

Sensory Changes: Complete anesthesia in the region of the eustachian tube, nasopharynx, soft palate, uvula, tonsillar pillars, and base of tongue; on dorsal wall of pharynx certainly as far as epiglottis and on anterior wall also—these changes extending to the mid line. There was no sensory loss of the external ear in the cases tested.

Secretory: No disturbance of salivary secretion.

Taste: Loss of this sense over the posterior one-third of the tongue on the affected side.

CASE REPORT

In June of 1930, Mrs. L. P. of Tulsa, aged 76, white, able to actively manage her household affairs began to suffer from a peculiar type of pain in the region of her right tonsil and base of the tongue. The pain was paroxysmal and lancinating in type. The patient described the sensation as that of having the right base of the tongue "twisted out violently." Pain radiated into the right ear, the patient distinctly feeling it spread from the throat outward into the ear; it radiated at times down into the right side of the neck. The paroxysms lasted from one second to four or five seconds and varied in frequency from twenty or more per hour to just a few during a twenty-four hour period. Pain was occasioned by swallowing —particularly liquids and more especially acid foods like tomatoes—by talking, at times by chewing, and, she believed, by chilling of her body, particularly the region of the right ear. Because of the pains she refused to eat except very sparingly and lived in constant dread of them. A physician examined her carefully and thoroughly at that time and interpreted the attacks as trigeminal "tic douloureux." The blood pressure was elevated, being 180-100 and a history of chronic cholecystitis was elicited, otherwise the patient seemed in excellent physical condition for her years. An otolaryngologist was consulted who found an old catarrhal condition of the right middle ear and agreed with the diagnosis of trigeminal neuralgia.

Conservative treatment was instituted although the medical attendant felt that alcoholic injection or posterior sensory root resection of the trigeminus might eventually be necessary. A remission occurred about July 21, 1930, and lasted until the early part of September of the same year. At this time we saw her after receiving previously an accurate account of her former seizure. In all justice it must be admitted that the opportunity to analyze the symptoms before seeing the patient counted heavily in our favor as the unusual distribution of the pain was apparent from the history and we were not led astray by first seeing the patient during an attack when all the symptoms—except distribution—of a true "tic douloureux" were present. For this reason the location of the pain received its proper evaluation and we were at once suspicious. However, at that time we had read no accounts of glossopharyngeal neuralgia and a search of various text-books was not enlightening. Based on a careful study of the anatomy of the glossopharyngeal nerve we were forced to the conclusion that the pain must be occasioned by a neuralgia of it rather than the trigeminus. The otolaryngologist was again consulted and found the ear condition practically normal and no findings in the mouth, nose, pharynx or larynx accounting for the pain. A search of current literature convinced us by mid-October that the diagnosis of glossopharyngeal neuralgia was correct.

At the time of our first examination blood pressure findings were normal and careful physical examination revealed evidence of chronic cholecystitis only. Since the patient and her relatives would not consider surgery, painful seizures were rendered more bearable by the administration of codeine and other anodynes. In late October of 1930, the patient had recurrent attacks of abdominal cramps lasting for some hours and terminating after several loose, foul-smelling stools. Gastric anacidity resulting from long standing gall-bladder disease we felt to be the cause of these attacks and since the glossopharyngeal neuralgia precluded our getting permission to examine the gastric contents, hydrochloric acid was given "on suspicion" and a prompt and gratifying improvement occurred. The glossopharyngeal "tic douloureux" which had persisted with short remissions and exacerbations until this time now ceased and to this date has not recurred. However, in view of similar remission in other reported cases—one for three and three-fourths years—we expect momentarily a recurrence. There was no "trigger zone" that we could determine and cocainization of the anterior pillar, tonsil, and right base of the tongue gave no relief.

SUMMARY

Survey of the available literature revealed thirty-six reported cases of glossopharyngeal neuralgia, which we feel does not indicate the true frequency of the syndrome. Present statistics indicate an incidence of about twenty percent of tumor formation responsible for the neu-

ralgia, remainder being idiopathic. The role of focal infection is uncertain. There seems to be a greater tendency for males to develop the condition and most cases occur during the fifth to seventh decades.

Symptomatology is characteristic and diagnostic; differential diagnosis should be easy if the possibility of glossopharyngeal "tic douloureux" is known and kept in mind. A note of warning should be sounded with regard to mistaking migrainous or other atypical pains in this area for a true glossopharyngeal neuralgia.

The removal of focal infection, while indicated as a good medical principle, should not be held out as a hope of cure. Intracranial section is, undoubtedly, the only method of values and results from its use have been 100% satisfactory. The resulting sensory disturbance is far less objectionable than that following posterior root section or injection of the trigeminus. Dandy and Stookey have described the sensory, motor, and taste sense changes following operation in detail.

A case apparently of idiopathic origin in an elderly white female is reported who has enjoyed a remission of symptoms since October, 1930.

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THE RELATION OF OBSTETRICS AND PEDIATRICS TO DENTISTRY

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There is an old adage which states "for every child a tooth," and even today is not without foundation. With our present knowledge of dental hygiene it should be an idea of the past. If there is ever a time in a woman's life that she needs dental care it is during pregnancy. A pregnant woman assimilates an unusual amount of calcium, and if it is not supplied to her through proper diet, there results a partial decalcification of the bones and the teeth.

The examination of the teeth during pregnancy is one that is usually neglected. I am informed by the dentists that it is the exception rather than the rule for prenatal cases to be referred to them. In a report to the White House Conference, Polak' states that only in a very few prenatal clinics is there any dental hygiene practiced or taught, and that most supervision comes from physicians without proper consultation with the dentist.

Apparently there is a phobia that exists among the laity, that any dentistry, except the most minor, is dangerous during the prenatal period. It requires a good deal of effort on the part of the physician, as well as the dentist, to get these patients to have any operative procedures. The idea can only be corrected through the cooperation of the physician and the dentist. We know that only those operations which require prolonged anesthesia are contraindicated. Ordinary extractions should be done. Occasionally during pregnancy we see women who complain of neuralgia pains, extractions are sometimes done for their relief, and often without results.

Radiograph is always indicated when this symptom exists.

There are some physicians, as well as dentists, who believe that the filling of carious teeth should be temporary during the prenatal period. I have never been able to see the logic in this, certainly there is very little difference in the pain involved, and the time consumed, in the preparation of a cavity for a temporary and a permanent filling. Often times these patients neglect to return.

It is obvious that foci of the gums and the teeth should be properly treated. They are certainly a potential danger during pregnancy. Focal infections are a continual source of toxines and maybe the origin of some toxiemias.

It used to be taught that a clean tooth never decayed, but most investigators now believe that vitamin deficiency has marked influence on caries, and that all vitamins must be present for their prevention. As yet we do not know the quantity requirements of vitamins for the individual, nor do we know just how much is supplied to the fetus by the gravida. Bloch[2] has recently shown that deficiency in vitamin A causes no specific injury in formation and calcification of the teeth, and the same may apply to vitamin B and C. Nevertheless, it is important that a woman be instructed about her diet during pregnancy. Such a diet must supply sufficient minerals, and of course would supply sufficient vitamins for the development of bones and teeth. The best source of calcium is milk or skimmed milk products. The chief vegetables from which it is obtained are, beans, peas, spinach, cauliflower, with the addition of fruits, meats, eggs and cod liver oil it is obvious that the patient is well supplied with vitamins.

There should be close co-operation between the physician and dentist if the patient during pregnancy is to receive the proper dental attention. The physician sees the patient first, it is his duty for the wellfare of his patient that he insists on the proper dental care. The instruction for the patient as to hygiene of the teeth should always be left to the dentist, for very few physicians have any knowledge of such care. Marshall[3] in an article on dental dysfunction inquires as to whether the dentist is in position to recommend to his patients certain changes in their diet and to explain the necessity for these changes, and whether he is in a position to prescribe dietary regimen. He further notes that it is difficult in some cases to indicate a dividing line between the practice of medicine and dentistry. I do not believe that the dentist should prescribe any changes in the diet during pregnancy. There are often many changes that take place in the metabolism of these patients which the physician must observe and correct and for which recommendation or choice of food could not be carried out by the dentist.

Any physician who practices pediatrics should be able to inform parents about their children's teeth. The common opinion among the laity is that the temporary teeth require no special care, and regardless of their condition they will be followed by normal permanent teeth. Due to the efforts of the dental profession the teachers in our public schools are making some progress in having the children practice dental hygiene. The education of the children, of course, has some influence on the parents, and I believe that they are showing more interest in the care of their children's teeth.

We know that it is very important for temporary teeth to remain for their normal time in order to prevent anomalies of the jaw. According to Scheidt[4], the act of mastication through pressure of milk teeth stimulates the development of permanent dentition and the growth tendency. He further notes that promotion of growth of jaw has favorable influence on spacing of the permanent teeth as well as preserving the proper height of teeth, also the permanent loss of temporary molars has considerable effect on entire permanent arrangement of teeth of the upper and lower jaw. Especially is this true of first permanent molars.

There is a great temptation to have the decidous teeth which are carious, often to the point where they just protrude beyond the gum margin, extracted. This should never be done unless there is some indication that they are becoming injurious to the child's health, or until complete resorption of the roots take place. The premature removal of these teeth will result in the disarrangement of the permanent teeth.

Mouth breathing, lip and thumb sucking very often result in malformation of the jaw and teeth. Parents should be strongly advised as to the danger of such habits. Children who have malocculsions

and malformation of the teeth should be placed under the care of the dentist. So often such conditions are treated lightly by the physician who could, with a little time and advice to the parents together with the co-operation of the dentist, prevent permanent deformities to the child.

The most common conditions which are seen in the teeth of children are caries. Mellamby[5] in a series of experimental diets has shown that diets high in vitamin D inhibits caries and increases the hardness of the dentine and controls the structure. He has further shown that the addition of fat-soluable vitamins adds to the value of vitamin D. There is considerable controversy about the aid of the other vitamins, excepting vitamin D as to the place they have in preventing caries and calcification. In the queries of minor notes A. M. A[6]., there is a statement that cod liver oil is concerned largely with the development of unerupted teeth and calcification of the bones. Bloch states that vitamin A is not necessary in the prevention of caries. The part played by the vitamines in the development of the teeth is not clear as yet. There remains considerable work to be done before we properly place their usefulness in dentition. However, we do know that a properly balanced diet is essential to the wellfare of the individual and in such a diet, reenforced with vitamin D we should secure sufficient of the other vitamins regardless of their place in dentition. Certainly the dentist and the physician should co-operate in the diet of the child when there is evidence that faulty diet is injurious to the teeth. Such advice is often not well taken by the parents or the physician. I believe that the dentist of today is often better informed as to proper diet necessary for development of the teeth than most physicians. The physician should realize that his problems often are the dentists, and that they are working to a common end, the wellfare of the patient.

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FOCAL INFECTION FROM A DENTAL STANDPOINT*

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Focal infection viewed from a dental standpoint should be, and is the same as the view of the medical profession, except as we dentists are circumscribed by our particular field of operation. As far as our knowledge, our interests and the welfare of our patients are concerned, there are no chasms or bridges to cross between dental and general pathology.

Benjamin Rush, an M.D. (1818) and W. D. Miller, a dentist (1891) were among the first of their respective professions to note and give serious consideration to influences and relations of oral to systemic diseases.

As I understand it, focal infection means an invasion from a focus resulting in systemic infection—a focus of infection is a circumscribed area of tissue infected with pathogenic micro-organisms. Metastatic systemic disease being due to the fact that the organisms are carried from the focus by the blood or lymph stream to the points of localization where they multiply and excite an infection of the tissues in which they are lodged. The late text and our current literature are filled with this subject of focal infection, and I will only attempt to mention a few points relative to the dental field.

It is not necessary to name a long list of investigators and their findings, for generally speaking, they all agree on the entire theoreum of focal infection. But I just want to call your attention to some of the conditions, including structural and

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anatomical that are common to our field and by the very nature of the area from a histological and anatomical standpoint make of it a most favorable place to produce foci of infection.

In consideration of oral disease we must remember that we are dealing with unique types of tissue ond their relations, such as are not found in other parts of the body. The incapsulated pulp with its delicate nerve and blood supply, the superior and inferior maxillae with their dense outer surfaces and highly cancellous inner body, liberal blood supply, proximity of the maxillary sinus, fibrous gum tissues, etc. For convenience let us classify into intra-osseous and extra-osseous. In our first classification we find the carious tooth with its pulp involvement, the pulpless or devitalized tooth, the apical abscess, granuolmata, osteitis and sinusitis; second class would include, pathology of the gum tissue, gingivae, superficial peridental membrane, pyorrhea pockets, the partial and unerrupted third molars.

Streptococci and staphylococci bacilli, such as produce a long list of systemic disturbances, according to many of our investigators, are produced in the above mentioned areas within the mouth tissues.

I am inclined to think that few of us look upon the carious tooth with any great degree of suspicion as a focus of infection, yet when we remember the dental fibrilla which are truly a part of the tooth circulation and that they extend from the pulp center through the dentine to the enamel, why should it not take equal place with the pulpless tooth as a menace to the health of our patients?

Henrici and Hartzell have found forty-two to forty-five per cent of pulps in carious and pyorrhea teeth were infected although pulps had not been entirely exposed by any lesion.

The pulpless or devitalized tooth in my judgment, is not entitled to much consideration because in most any event a very large percent of them produce periapical infections. Suffice it to say that devitalization may be caused by caries, surgical interference, erosion, abrasion, peridental infection and trauma. We find many devitalized from this last named cause, of which the patient is unconscious.

The apical abscess with or without granuloma possibly holds first place in the dental area as foci of infection for several reasons: first, anatomical, being completely confined within the body structures, absorption into the blood stream is about the only way of escape. Second, number of organic disturbances directly traceable to their strain of bacilli. Third, their prevalence. Fourth, readily located by aid of radiogram.

The maxillary sinus often becomes involved and even a part of an apical alveolar abscess, either by reason of the close proximity or actual projection through the antrum floor by the apices of the teeth producing a sinusitis. Any tooth in the upper arch from cuspid to third molar might be the cause of such antrum involvement.

In our second classification we have the gum tissue and covering of the alveolus, the gingivae and peridental membrane with much fibrous tissue dependent almost entirely on a peripheral arterial and nerve supply making this field a very favorable place under pathologic conditions to either be the producer or the recipient of toxine from other parts of the body, but I desire to call your particular attention to the deep alveolar abscess, the partially erupted third molar and the impacted third molar.

Pyorrhea alveolaris is a disease characterized by inflammatory and degenerative changes in the tissue immediately surrounding the teeth which progresses until the peridental membrane, the alveolus and even the pulp are involved. The causative factors are many. They may be local or the result of a general systemic condition. And while we look upon any broken down inflamed area as a possible focus of infection, it is the deep pyorrhea pocket from which we possibly get the greater manifestations of toxic absorption and in which many investigators have found streptococci and staphylococci bacteria.

I mention especially the third molar area because there are few mouths, where these molars have been retained, that will not present some type of involvement, either pathologic or anatomically abnormal. The crowded condition often causing almost constant laceration of the epethelia of the cheek, with a possible prognosis of malignancy. The partially erupted, impacted and incarcerated teeth wherever located, furnish most favorable points for irritation and foci of infection. I am sure the specialist realizes the full import of these last mentioned offenders and he will no doubt enlarge upon the results of their affections. Many of these condiitions are

not known to the patient and are not observed by the casual examiner. In the course of an investigation by McCoy, one hundred and twenty-five cases were radiographed and in each there was found some unexpected pathologic condition, such as impacted and incarcerated teeth, incomplete root canal fillings, foci of chronic infections, pyorrhea pockets, etc.

More than fifty per cent of the cases with chronic foci of infection had systemic manifestations.

In conclusion I wish to say with reference to the devitalized tooth that there may be an occasional condition existing wherein we are justified in attempting to preserve one of these chief offenders if the patient is in perfect health and understands the risk taken, but when I see a pulpless tooth or a pyorrhea pocket that involves the cancellous alveolus, I think of a barracks inhabited by an invading army, and in my judgment they should be eliminated

—o—

SOME DISEASES AND CONDITIONS MOST FREQUENTLY MISTAKEN for PULMONARY TUBERCULOSIS

R. L. HICKMAN, M.D.
Western Oklahoma State Tuberculosis Sanatorium
CLINTON

Having been engaged in tuberculosis work for a number of years we are convinced that there must, at least at times, be considerable confusion in the average practitioner's mind on many cases about a differential diagnosis of pulmonary tuberculosis. It is a sad fact that most of the patients admitted to the Western Oklahoma State Tuberculosis Sanatorium with proven tuberculosis are in the far advanced class. This classification being made according to the National Tuberculosis Association, and adopted by the Diagnostic Standards Committee of the year 1929, as follows.

(a) A lesion of slight disseminated infiltration or fibrosis extending through more than the equivalent of the volume of one lung.

(b) Severe infiltration, with or without fibrosis, which may extend through not more than the equivalent of one-third of the volume of one lung.

(c) Total diameter of cavities when present must exceed 4 centimeters. In the far advanced conditions one may have slight or no symptoms, such as loss of weight, tachycardia, fever and intestinal disturbances.

From March 1st, 1931, to September 1st, 1931, a total of 219 patients were admitted to the sanatorium. Of this number 112 or 51% were far advanced (or 66.6% of the proven tuberculous), 43 or 19% were moderately advanced, and 13 or 6% were minimal and we found after a sufficient period of observation 51 or 24% were non tuberculous. In this classification of non tuberculous all cases of childhood type of tuberculosis, admitted since July 1st, when the children's department was opened, are included. Most of them reacted to tuberculin, (Mantoux, or intracutaneous method). Contact and childhood type account for 15 cases.

Undiagnosed 17 cases. Under this heading is included many who were sent to the institution due to the much talked of depression, and probably had no organic disease. In some instances domestic relationships had something to do with the admission. The diseases in which a mistaken diagnosis had evidently been made, in the order of their frequency are, as follows:

1. Cardiac conditions, 8.
2. Bronchiectasis, 4.
3. Psychoses, 2.
4. Hyperthyroidism, 2. Proven by basal metabolic rate.
5. Sarcoma, 1. Proven at autopsy.

6. Post pneumonic empyema, 1. cured by rib re-section.
7. Foci of infection, 1. (Bad teeth improved and gained weight after oral attention).

Hyperthyroidism will not be discussed here other than to say that we do not encounter thyrotoxicosis as commonly in Oklahoma as it is found in the Great Lakes region for example. Occasionally we get a patient with a B.M.R. of plus 20 or plus 30; but it must be borne in mind that any febrile condition the metabolic date is increased.

The minimal requirements for a diagnosis of pulmonary tuberculosis according to the National Tuberculosis Association and the United States Veteran's Bureau are based on Dr. Lawrason Brown's five cardinal signs, of which two must be present: (1) Hemoptysis of a drachm or more —not merely streaked sputum. (2) Pleurisy with effusion. (3) Moderately coarse rales (above the third rib anteriorly and the third vertebral spine posteriorly) that persist after cough. (4) Parenchymatous lesions by X-ray in the same area; and (5) the presence of tubercle bacilli in the sputum.

The most reliable physical finding is the moderately coarse rale, persistent after cough, in the upper third of the lung.

It is very easy to understand how cardiac conditions can be and are confused with tuberculosis, especially with the presence of cough, hemoptysis, dyspnoea, precordial pains, flushed face, tachycardia, ease of fatigue and very commonly gastrointestinal disturbances. Many cardiacs are emaciated and at times have slight fever.

Several years ago Pottenger said: "Hemoptysis is more valuable in the diagnosis of pulmonary tuberculosis than the Wassermann in syphilis." All cases of hemoptysis are considered as tuberculous until proven otherwise, but frequently the proof is readily ascertained. Richard Cabot states that of 3444 cases of hemoptysis in the Massachussetts General Hospital 1177 or 34% were due to mitral disease.

In mitral disease there is commonly a history of tonsillitis, chorea or acute rheumatic fever. Examination may reveal an enlarged area of cardiac dullness, downward or outward. The apex beat, if visible will or maybe outside of the midclavicular line and is frequently diffuse. With mitral stenosis a thrill is often palpable. Almost invariably a murmur is present over the mitral area, and is not transmitted.

A frequent confusing point is the presence of rales which are due to stasis. They are bilateral and basal, a very uncommon occurrence in pulmonary tuberculosis. X-ray examination may reveal a hazy clouding of the area but no characteristic mottled appearance of tuberculosis.

For many years a small heart has been considered to be a causative, or at least associated, condition of pulmonary tuberculosis. In most cases of tuberculosis there is a decrease in size of the heart with a decreased blood pressure. The normal an the small hearts of the tuberculous have a convacity along the left border in the auricular region. In mitral disease the heart is usually increased in size and there is a pronounced convexity or "mitral bow" along the left border. Heart films should be made at a distance of two meters or about six feet. The greatest horizontal diameter of the heart should not exceed 40% of the internal chest diameter; this depends somewhat on the body build of the individual.

A very important point that must be mentioned is that mitral disease and pulmonary tuberculosis are almost never associated. In talking with cardiologists of the Michael Reese group last summer many had never seen a case. The stasis of the lungs seems to exert a prohibitive influence on the Koch's bacillus.

The next most commonly confused condition is bronchiectasis. The differentiation is more difficult and the two conditions may be associated. Many patients with this disease pass through life considered as tuberculous. In this condition there is cough, expectoration of foul smelling purulent suptum, hemorrhages, and rales. Of the 3444 cases of hemoptysis of Cabot 58 or 1.7% were due to bronchiectasis.

The history of the case extends over many years with cough and expectoration, yet the patient frequently does not fail markedly in health or lose in weight. Fishberg states, "We should not be rash in making a diagnosis of tuberculosis in a person who has coughed for many years and his general health has not suffered much, unless signs and symptoms are clear cut or the sputum is positive." Willis says, in Laboratory Diagnosis and Experimental Methods in Tuberculosis: "Since tubercle bacilli are nearly always demonstrable in the pus which comes from tuberculosis of the lung, the persistent presence of pus in sputum in which careful

and repeated search fails to reveal these germs is presumptive evidence against tuberculosis and points rather to abscess of the lung, bronchiectasis, a mycotic infection or some other non tuberculous disease."

The physical signs of bronchiectasis frequently reveals a scoliosis with the concavity turned toward the affected side. Rales are present but again, as in mitral disease, they are basal and frequently unlateral.

The radiograph of bronchiectasis may reveal nothing. Generally there is an increased linear marking extending downward from the hilus. A lipiodal injection followed by a radiograph is diagnostic. There is again no characteristic mottled appearance of tuberculosis.

So don't banish your patients to distant climes on account of hemoptysis. You must have at least two of the five cardinal signs present before you can make a positive diagnosis of pulmonary tuberculosis. Of course germs in the sputum is positive evidence of pulmonary tuberculosis. Lawrason Brown remarks, "It might be fair to state that the physician who follows the simple method of five cardinal signs may be found wrong in about 2% of cases."

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INFECTIONS IN GENITO-URINARY TRACT, AND COMPLICATIONS: FURTHER ADVANCES IN TREATMENT

Hugh H. Young, J. A. C. Colston and J. H. Hill, Baltimore (Journal A. M. A., Feb. 27, 1932), state that the bacteriology of the urinary tract shows an extremely varied flora and organisms of a wide range of virulence and susceptibility to antiseptics. B. coli is inhibited by 1:500,000 mercuric chloride, whereas B. lactis-aerogenes is not inhibited until the strength of chloride in the broth culture reaches 1:30,000. The alkalizing bacteria are best combated by acids. The great difficulty of eradicating infections of the genito-urinary tract is due to the fact that the bacteria have usually penetrated deeply into the tissues and glands beyond the urinary passages. On this account, injections and irrigations frequently fail to eradicate the infection. The use of chemotherapy and protein therapy have been shown to be of distinct value. A series of complicated gonococcus infections, the cure of which was greatly hastened by the use of intravenous mercurochrome, is cited as well as the failures. Gram-postive coccus infections of the kidneys and bladder are shown by a series of cases to have been eradicated by intravenous injections of neoarsphenamine. Bacillary infections of the urinary tract, particularly the Aerobacter group, have been shown to be especially resistant, but cases that have responded favorably to intravenous injections of mercurochrome are cited. Septicemias of urinary origin and cases of sepsis without blood stream infection are shown in some instances to be much benefited by chemotherapy. The authors reassert their confidence in the great advisability of supplementing local injections and irrigations in urinary infections with intravenous therapy.

ANTIDOTES FOR STRYCHNINE POISONING

Howard W. Haggard and Leon A. Greenberg, New Haven, Conn. (Journal A. M. A., April 2, 1932), describe experiments in which they demonstrated that magnesium sulphate does not prevent or even diminish strychnine convulsions in rats. It is not an antidote for strychnine. Apomorphine controls convulsions in rats, and dogs. It allows recovery after approximately twice the lethal dose of strychnine, but not when the dose is three times the lethal amount. Strychnine does not antagonize apomorphine or even diminish its toxicity for rats. The authors report three cases in which the use of apomorphine was followed by recovery in human beings who had taken presumably lethal amounts of strychnine. Phenobarbital sodium controls strychnine convulsion in rats and dogs. Recovery follows the administration of five times the lethal dose of strychnine. A true antagonism between the actions of phenobarbital sodium and strychnine is indicated. Rats and dogs that have received amounts of phenobarbital as high as three times the lethal dose may be saved by the administration of amounts of strychnine which by themselves would be fatal.

PNEUMOCOCCUS PSEUDOMEMBRANOUS PHARYNGITIS: REPORT OF FIVE CASES TREATED WITH HYDROCUPREINE HYDROCHLORIDE

De Wayne G. Richey, Pittsburgh (Journal A.M. A., Feb. 27, 1932), presents pertinent bacteriologic and clinical data from five adult persons suffering from an acute pseudomembranous pharyngitis, beginning in two cases as a stomatitis. In all the cases a typical pneumococcus was found, by standard bacteriologic methods of examination of the fibrinous exudate, to be the dominant micro-organism. Clinically the local symptoms are constant and consist of a severe sore throat, salivation, dysphagia and cervical adenitis; the systemic reaction varies considerably. The characteristic lesion is uniformly found: a white, fairly tough, fairly adherent, odorless sheet of fibrin on a superficially eroded oropharyngeal mucosa. It is very similar to the diphtheritic pseudomembrane caused by the Klebs-Loeffler bacillus. Diagnosis should be made by bacteriologic examination. The condition does not endanger life as a rule; attacks tend to recur. The lesion resists most types of local and general therapy. Striking results were obtained by the topical application of ethylhydrocupreine hydrochloride. The author stresses the cardinal importance of a close cooperation between the clinician and the bacteriologist.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal the manuscript will be returned to the writer.

Failure to receive The Journal should call for immediate notification of the editor, 810 Manhattan, Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmancy of the A. M. A., will not be accepted.

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EDITORIAL

THE MEDICAL RESERVE CORPS.—ITS PERSONNEL; ITS MISSION

The prevention of unnecessary suffering, disease and death, at a time of mobilization of troops, requires a great many more medical officers than the standing army possesses.

This is provided for by having a Reserve; a corps of civilian doctors, physically, mentally and professionally fit, sufficiently acquainted with the rudiments of military routine to comfortably, quickly and successfully do their work—if called upon in an emergency.

Surely every physician worthy of the name is willing to stay with his constituents when they are transported from their homes to a military camp.

Not every physician is physically, mentally or professionally fit for military service. A rudimentary acquaintance with military routine is necessary in military service. To minimize assignment of square pegs to round holes executives must have some acquaintance with those they direct.

For these reasons organization and training of Reservists is essential. The value of a Medical Reserve Corps is inversely proportionate to the age of the majority of its members.

Consequently the Corps Area Surgeon, and the present members of the Reserve Corps, are anxious that all the members of the profession be acquainted with the Reserve Corps and solicitous for its perpetuation in numbers and knowledge sufficient to assure decent medical care of men mobilized to meet an emergency.

All young physicians should be members of the Reserve, if eligible; all others should give it their interest, sympathy and support. To facilitate such, the organized Reserve officers hold a meeting, usually an inexpensive banquet, at the time and place of the annual meeting of the Oklahoma State Medical Association; this year at Tulsa there will be such a meeting, everyone is most earnestly invited to attend.

—JOHN A. RODDY, M.D.

YOUR PAPERS FOR THE ANNUAL MEETING

Once again it becomes the duty of the editor to call attention to the necessity of every writer of a paper to be presented at the Annual Session, to prepare it exactly as it should appear in our Journal; that means:

(a) Title.
(b) Writer's name and address.
(c) Time and place of reading.
(d) Be sure and do not carry this paper

away from the meeting as it only necessitates correspondence, often loss of the paper and sometimes printing it out of its proper turn.

These papers should be typewritten (double spaced), carefully corrected, then recopied in duplicate, triplicate preferred, so if the original is lost a copy is obtainable.

MAINTAINING PROGRESS

The writer recently had his attention called to a curious commentary by "Mark Twain," (Samuel L. Clemmens), who was not only one of America's greatest humorists, but a philosopher, as shown by his writings, and one of the keenest observers of all things about him. From a story by Mark Twain, "The Majestic Literary Fossil" the following is noted: "This introduction brings me to my literary relic. It is a Dictionary of Medicine, by Dr. James, of London, assisted by Mr. Boswell's Doctor Samuel Johnson, and is a hundred and fifty years old, it having been published at the time of the rebellion of '45. If it had been sent against the Pretender's troops there probably wouldn't have been a survivor. In 1861 this deadly book was still working the cemeteries—down in Virginia. For three generations and a half it had been going quietly along, enriching the earth with its slain. Up to its last free day it was trusted and believed in, and its devastating advise taken, as was shown by notes inserted between its leaves."

A few months ago a colleague of mine, while hunting near Muskogee, having some time on his hands while a friend transacted some business, stepped up stairs to a doctor's (?) office, intending to make a friendly call. The doctor (?) was out; on the wall hung a diploma of the early '90's; investigating further the visitor noted that every volume of the few which the office contained, was of the vintage of the year of the doctor's graduation. There was no evidence whatever of modern literature or modern equipment. Dust and disorder was the principal feature encountered.

These are the things that often bring criticism not only to the doctor in question, but the entire profession, by its invidious reproach. The absolute necessity for all physicians to appreciate that their work must be a life work, one of continuous study, should be impressed upon them. Nothing in the arts of science has progressed to the extent of medicine in the last thirty or forty years. No man can cover the entire field, but every man should keep abreast of modern times. This can only be done by continuous application, careful analysis and sensible application of those believed to be best.

THEN AND NOW

Called upon recently to write a paper for the Muskogee County Medical Society, the editor believes that some of the information culled from old records will be of interest to Oklahoma physicians. It is as follows:

"Minutes, Muskogee, Indian Territory, April 18, 1881. At 2:00 P. M., a number of medical gentlemen met persuant to a previously circulated call for a mass convention for the purpose of medical organization. The convention was called to order by Dr. B. F. Fortner, who named Dr. G. W. Cummings to the chairmanship of the convention, which was unanimously confirmed. The organization was completed by the election of Dr. Cutler, vice-president, and Drs. Fortner and C. Harris as secretaries. The chair proceeded to state the object of the meeting by reading the original call and address appended. The chair proceeded to appoint a committee on Constitution and By-Laws, consisting of Drs. B. F. Fortner and Felix McNair.

"The notes of the following meeting are very brief or entirely absent. A Constitution was adopted and the dues were fixed at $1.50 annually. Among these organizers, not one is living today, and so far as I am able to say the minutes of October 10, 1889, show only five physicians living. Among those are: Drs. R. L. Fite, Tahlequah; F. B. Fite, Muskogee; Oliver Bagby, Vinita; Geo. A. McBride, of Texas.

"The Oklahoma Territorial Association was organized in a similar manner May 9, 1893, at Oklahoma City. It is significant that the committee on the Constitution and By-Laws 'Recognized the adoption of the Constitution and By-Laws of the Indian Territory Medical Association with the following changes in the Constitution, *namely*: Dues $1.00—censors, three.'

"When it became inevitable that both Oklahoma and Indian Territory would likely become one state, overtures were made from each society to the other and an agreement for amalgamation or merging was entered into in 1907. The writer was present at the meeting at Oklahoma City as one of the representatives from Indian Territory. So far as is known only three of that committee are living; Doctors G. A. Wall, Tulsa; E. O. Barker, Guthrie; and the writer."

Recently Dr. Ray Lyman Wilbur, a member of President Hoover's Cabinet

and former President of Leland-Stanford University, California, stated that "Within three decades American Medicine has been made over. The laboratory has won its way into every department of the medical school, as well as the hospital. Empiricism has largely succumbed to the scientific method. The doctor who is working today with the education given him thirty years ago belongs in the antique shop. The doctor who does not read the current medical journals, follow the activities of the various medical societies and attend occasional clinics, is not a good public servant. The doctor's life is one of clinical experiences, study and reflection, and association with his fellows. Many facilities are now required to care for the sick in a satisfactory and intelligent manner. With the telephone, improved highways, automobile, trained nurse, and hospitals, most parts of our country offer the doctor time-saving methods of caring for the sick. If the time saved goes either from day to day, concentrated in several weeks at a time, into periods for relaxation for personal health and into opportunity for further study, great professional advances are possible."

For a new state, Oklahoma has undoubtedly made remarkable progress in all matters medical. Years ago the Rockefeller Foundation noted that it started out with the best that was to be had at that time, modern in every respect, and most centers since that time have kept up to par. To my mind there is no doubt but what the highly efficient service, medical and surgical, which may be obtained in many localities in Oklahoma today, is due to cooperation on the part of a few physicians and in passing I feel that I must say that the man practicing medicine or surgery today, who must depend solely and entirely on his own efforts is certainly not in position to render the service the public demands. Please understand that I do not criticise or decry that ability—clinical diagnosis—which must always be kept first in mind by the man who has a well rounded out clinical and diagnostic knowledge plus the aid of many modern improvements in diagnosis, but he has a great advantage over the man who attempts to rely solely on his clinical observations; Oklahoma certainly has many of these. The physician keeps abreast by attending clinics, burning midnight oil and delving into literature in order to render that service which is due his patient. Personally I feel a great pride in this continued and sustained effort to keep abreast of modern medicine."

Editorial Notes—Personal and General

DR. T. H. BRIGGS, Wewoka, is a candidate for commissioner in Seminole County.

DR. AND MRS. JAS. T. RILEY, El Reno, visited friends in St. Louis in March and April.

DR. J. N. HARBER, Seminole, who spent the last two months in Arizona, has returned to his home.

DR. W. J. WALLACE, Oklahoma City, recently addressed the Y. M. C. A., on "When a Man Marries."

DOCTOR S. E. MITCHELL, Muskogee, took a one month trip to southern states during March and April.

Dr. J. P. TORREY, Bartlesville, has been appointed County physician to succeed Dr. J. V. Athey, resigned.

DR. ELLIS LAMB, Clinton, attended the American College of Physicians meeting, held at San Francisco in April.

DR. EMILE ROY, Tulsa, who was recently injured in a collision of his automobile and a street car, is reported improved.

DR. WINNIE M. SANGER, Oklahoma City, addressed the Bristow High School on the "Problems of the Youth of Today."

DOCTOR PAT FITE, Muskogee, attended the meeting of the Southern Society of Clinical Surgeons held at Rochester in April.

DR. W. C. VERNON, Okmulgee, has returned from Vienna, after several month's stay, where he took a post-graduate course in surgery.

DR. C. O. EPLEY, Oklahoma City, General Practice, announces his removal from the Medical Arts Building, to the McBride Clinic, 717 No. Robinson.

ROGERS COUNTY MEDICAL SOCIETY elected Doctors C. W. Beson, Claremore, president; Ira B. Nelson, Claremore, vice-president; W. A. Howard, Chelsea, secretary-treasurer.

DR. L. A. TURLEY, Norman, of the University School of Medicine talked on "Radiant Light and Its Effect on Tissue," April 7th, at the monthly meeting of Cleveland County Medical Society.

STEPHENS COUNTY MEDICAL SOCIETY met April 26th and after a dinner at the new Duncan Hotel, Dr. Arthur W. White read a paper on "Peptic Ulcer" and Dr. C. B. Taylor on "Traumatic Rupture of the Urethra," both of Oklahoma City. The meeting were guests of Doctors W. T. Salmon and B. H. Burnett.

MEDICAL RESERVE CORPS OFFICERS, through their chairman, Dr. Paul R. Brown, Tulsa, announce a dinner for 6:00 P. M., Mayo Hotel, Wednesday, May 25th. Reservations should be made with Dr. Brown.

MR. PAUL FESLER, former superintendent of University Hospital, Oklahoma City, and for a number of years superintendent of Minneapolis Hospital, and now superintendent of one of the largest Chicago Hospitals, visited Ardmore in the interest of hospitalization problems recently.

GARFIELD COUNTY MEDICAL SOCIETY had its annual guest day March 31st, with the arrangements in the hands of the officers of the County Society. The speakers included Dr. H. Winnett Orr, Lincoln, Nebraska, who presented a paper on "Osteomyelitis"; Dr. Willard Bartlett, Jr., St. Louis, who gave a paper on "Coronary Occulsion, With Special Reference to Blood Supply." Among other entertaining features was a banquet, followed by motion pictures.

DOCTOR CHARLES K. TILLISON

Dr. Charles K. Tillison was graduated from St. Joseph Medical College, St. Joseph, Mo., in 1893. He began practicing in Bartlesville in 1896, and after a few months removed to Ramona, Oklahoma, practicing there until 1929, when he became disabled by an attack of cerebral hemorrhage. He was a charter member of the Washington County Medical Society and was a member at the time of his death, which occurred April 13, 1932, at Ramona, Oklahoma. He was 62 years of age.

DOCTOR JEFFERSON D. KISER

Dr. Jefferson D. Kiser was born in Lexington, Kentucky, in 1868; was graduated from Kentucky School of Medicine, Louisville, Kentucky, in 1894. He practiced in Lexington, Kentucky, until 1917, and has practiced in Bartlesville as an Eye, Ear, Nose and Throat Specialist since that time. He died suddenly from a heart attack, April 14, 1932. He was a member of the Washington County and Oklahoma State Societies and a member of all Masonic bodies.

DOCTOR MARY E. BARNES RAY

Dr. Mary E. Barnes Ray, aged 69, was graduated from Cleveland University of Medicine and Surgery, Cleveland, Ohio, in 1887. Dr. Ray was located in Tecumseh, Oklahoma, for many years and came from there to Bartlesville, where she practiced until her retirement about five years ago. During her residence in Bartlesville she was an active member of the Washington County Medical Society, and since her retirement she has lived with her daughter, Mrs. George Gay, in Ponca City, where she died April 12, 1932, of heart failure.

DOCTOR WILBUR E. RAMMEL

Whereas, the Almighty in His infinite wisdom, has removed from our midst our dear friend and fellow worker, Dr. Wilbur E. Rammel.

Be It Hereby Resolved, that in the passing of Dr. Rammel, our hearts are made sad by the loss of a well loved friend and fellow physician, and that our sympathy goes out to the grief stricken family in this their hour of trouble.

Be It Further Resolved, that in the death of our friend we feel that the profession which he honored has lost one of its most earnest and sincere workers, and the community one of its most useful and valuable citizens.

And Be It Further Resolved, that one copy of these resolutions be sent to the Journal and one copy sent to the family.

Committee,
O. I. GREEN,
W. H. SHIPMAN,
Washington County Medical Society

DOCTOR J. CHARLES SCHLIGHT

Dr. J. Charles Schlicht died at his home in McAlester, April 2, 1932, of acute septic endocarditis.

Dr. Schlicht was born, April 24, 1881, and had been a resident of Pittsburg County for thirty years. He was married in 1903 to Miss Mattie Walker, who with his two sons, Earl and Otto survive. He was a member of the Masonic Lodge in Scipio, the Consistory in McAlester and the Shrine in Muskogee. He attended the First Christian Church.

In the passing of Dr. Schlicht, not only is his loss keenly felt by his associates of many years in the medical profession, but also to his legion of friends throughout the countryside. His talents were well developed, making him an appreciated counselor and his unswerving devotion to practice regardless of his patient's ability to remunerate him are outstanding features.

The Pittsburg County Medical Society extends its sincere sympathy to the bereaver family and desires it to be known that it mourns Dr. Schlicht's passing.

GOLF AND INFANT FEEDING

It is possible to play over the entire course with a single club and bring in a fair score. But playing with only one club is a handicap. The best scores are made when the player carefully studies each shot, determining in advance how he is going to make it, then selects from his bag the particular club best adapted to execute that shot.

For many years, Mead Johnson and Company have offered "matched clubs," so to speak, best adapted to meet the individual requirement of the individual baby.

We believe this a more intelligent and helpful service than to attempt to make one "baby food" to which the baby must be adapted.

PROGRAM

FORTIETH ANNUAL SESSION, OKLAHOMA STATE MEDICAL ASSOCIATION, TULSA, OKLAHOMA, MAY 24, 25, 26, 1932.

(Program subject to change)

Meeting Place—All meetings will be held in the Hotel Mayo, Telephone, 3-2141 (local); L. D. 100.

Registration—Sixteenth Floor, Hotel Mayo. All physicians except those from outside the State and visiting guests, must hold membership certificates for 1932 before registering. It is urgently requested that you see your County Secretary if you are not in good standing and become so before this meeting.

Woman's Auxiliary will register on the Mezzanine floor, Hotel Mayo.

Dermatology and Radiology Society—Will hold clinics during the morning of May 24th, 9:00 A. M., Crystal Ball Room. Papers and the regular program will be heard in the afternoon, in the same room.

Oklahoma Pediatric Society—Will hold clinics during the morning of May 24th, 9:00 A. M., Hotel Mayo. Its regular progrom of papers and discussions will be held in the afternoon, in the Junior Ball Room, Mezzanine floor.

Medical Reserve Corps Dinner—Hotel Mayo, 6:00 P. M., May 25th. For reservations apply to Dr. Paul R. Brown, Tulsa.

Guest of honor at the dinner will be Lieut.-Colonel Sanford W. French, Station Hospital, Fort Sam Houston, Texas.

Council—Will meet at 4:00 P. M., Tuesday, May 24th, Hotel Mayo, and thereafter upon the call of the President. It is the function of the Council to originate and consider all business affairs of the Association. All such matters should be presented to the Council before going to the House of Delegates.

House of Delegates—Will meet in the Crystal Ball Room at 7:30 P. M., Tuesday, May 24th, for the transaction of such business as is necessary. House of Delegates also meet at 8:00 A. M., Wednesday, May 25th. This meeting will be held in the large meeting room on the Mezzanine floor. The first order of business will be the election of officers, after which unfinished business will be disposed of.

Delegates—Prior to the meeting Delegates will submit their credentials to the Credentials Committee, small meeting room, sixteenth floor, Hotel Mayo.

Golf—Tulsa followers of golf have arranged for a tournament at the Tulsa Country Club, Tuesday, May 24th.

The American Social Hygiene Association will present during the meeting, films on "The Modern Treatment of Syphilis" and "Gonorrhoea," in the main private dining room, Mezzanine floor.

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TULSA COUNTY COMMITTEES

Doctor W. J. Trainor, Tulsa, Chairman of the Committee on Arrangements on behalf of the Tulsa County Society, announces the following Committees to handle the work of the annual meeting, at Tulsa, May 24, 25, 26, 1932:

General Chairman. W. J. Trainor, 1011 Medical Arts Bldg., Tulsa, Okla.

Registrations. C. C. Hoke, Petroleum Building, Tulsa.

Finance. W. Albert Cook, 1107 Medical Arts Bldg., Tulsa.

Entertainment. W. A. Showman, 409 Medical Arts Bldg., Tulsa.

Hotels. James Stevenson, 615 Medical Arts Bldg., Tulsa.

Golf. Charles J. Wood, 511 Medical Arts Bldg., Tulsa.

Ladies' Entertainment. Women's Auxiliary of The Tulsa County Medical Society, Tulsa.

Reserve Officers. Paul R. Brown, 517 Medical Arts Bldg., Tulsa.

Scientific Exhibit. Morris B. Lhevine, 1007 Medical Arts Bldg., Tulsa.

Fraternal Dinner. Ralph A. McGill, 1010 Medical Arts Bldg., Tulsa.

Badges. J. C. Brodgen, Mayo Bldg., Tulsa.

WOMAN'S AUXILIARY

General Headquarters—Hotel Mayo.

Registration—Mezzanine floor, Hotel Mayo.

Alfresco Party—At "Ledgerton" the surburban home of Mrs. Fred Y. Cronk, Tuesday evening, May 24th, 6:00 P. M.

Business Meeting of Woman's Auxiliary Wednesday, May 25th, 10:00 A. M., Hotel Mayo.

Presiding — Mrs. Herbert L. Wright, President.

Musical Tea—At "Clinton Ingleside" the home of Mrs. Fred S. Clinton, Wednesday, May 25th, 3 to 5 P. M.

Luncheon—Tulsa Club, Thursday, May 26th, 12:30 P. M.

Tea—For the retiring and newly elected officers, Mrs. Charles J. Wood, hostess, University Club, Thursday, May 26th, 3 to 5 P. M.

GENERAL SCIENTIFIC SECTIONS

Will meet May 25th, 8:30 A. M. Crystal Ball Room, sixteenth floor. (All papers and addresses limited to forty-five minutes).

WEDNESDAY, MAY 25TH

(*Morning*)

8:30 *Clinic—Ocular Migraine, Its Syndrome and Treatment*—E. J. CURRAN, Kansas City, Mo. Crystal Ball Room, Hotel Mayo.

9:30 FRANK C. NEFF, Kansas City, "*Active Immunization Against Diphtheria.*"

10:15 *Address*—MAJOR GENERAL HUGH CUMMING, Surgeon General U. S. Public Health, Washington, D. C.

11:00 *Section on General Surgery*, Crystal Ball Room.

11:00 *Section on General Medicine*, Junior Ball Room.

(*Afternoon*)

1:30 *Section on General Medicine*, Junior Ball Room.

Section on General Surgery, Crystal Ball Room, sixteenth floor.

Section on Eye, Ear, Nose and Throat, small meeting room, sixteenth floor.

GENERAL MEETING

General Chairman—W. J. TRAINOR, presiding.

8:00 *Invocation*—REV. CLAUD HILL, Pastor First Christian Church, Tulsa, Oklahoma.

Address—Honorable PAT MALLOY, Tulsa, Oklahoma.

Introduction of Guests—H. C. WEBER, President, Bartlesville, Okla.

Introduction of Guests.

Address—R. M. ANDERSON, President, Shawnee.

(*Evening*)

9:00 *Reception and Dance*, Crystal Ball Room.

THURSDAY, MAY 26TH

(*Morning*)

8:30 *Clinics*, Tulsa County Medical Society, Crystal Ball Room.

9:30 *Address*—ARTHUR E. HERTZLER, Halstead, Kansas.

10:15 *Allergy As Met With in the United States Army*—LIEUT.-COLONEL SANFORD W. FRENCH, Station Hospital Fort Sam Houston, Texas.

11:00 *Section on General Surgery*, Crystal Ball Room.

11:00 *Section on General Medicine*, Junior Ball Room.

(*Afternoon*)

1:30 *Section on General Medicine*, Junior Ball Room, Mezzanine floor.

Section on General Surgery, Crystal Ball Room, sixteenth floor.

Section on Eye, Ear, Nose and Throat, small meeting room.

SECTION ON GENERAL MEDICINE

Junior Ball Room, 11:00 A. M., May 26, 1932

Chairman, HENRY H. TURNER, Oklahoma City.

Secretary, FREDERIC G. DORWART, Muskogee.

Chairman's Address—*Anterior Pituitary Hormone*—HENRY H. TURNER, Oklahoma City.

The Physician, a Leader in Mental Hygiene—J. L. DAY, Norman.

The Emotions in Medicine—M. S. GREGORY, Oklahoma City.

Vocational Rehabilitation of Tuberculosis Patients—F. P. BAKER, Talihina.

More Recent Advances in the Treatment of Pulmonary Tuberculosis — R. M. SHEPARD, Tulsa.

Artificial Pneumothorax in Pulmonary Tuberculosis with Special Reference to the Cauterization of Adhesions—LEWIS J. MOORMAN, Oklahoma City.

A Pollen Survey of Northeastern Oklahoma—E. RANKIN DENNY, Tulsa.

Cistern Puncture in Neurosyphilis—J. F. CAMPBELL, Muskogee.

Non-Valvular Heart Disease—WANN LANGSTON, Oklahoma City.

Treatment of Hypertension with Bismuth Subnitrate—RUSSELL C. PIGFORD, Tulsa.

Hospitalization in Veterans Administration Hospitals—E. A. WELCH, Muskogee.

Ringworm and Its Allied Eruptions—DARRELL G. DUNCAN, Oklahoma City.

New Concepts of Liver Function. Report of a case of Primary Carcinoma of the Gall Bladder—IAN MACKENZIE, Tulsa.

Kummell's Disease of Bone—F. J. WILKIEMEYER, Muskogee.

Two years of Vaccine Therapy in Chronic Infectious Arthritis; Reactions and Results Obtained from Same—E. GOLDFAIN, Oklahoma City.

Diphtheria—GEORGE H. GARRISON, Oklahoma City.

The Management of Abortion—J. B. ESKRIDGE, Oklahoma City.

Gastro Intestinal Symptoms due to Allergy—RAY M. BALYEAT, Oklahoma City.

PROGRAM
OKLAHOMA STATE PEDIATRIC SOCIETY
WITH THE
Oklahoma State Medical Society

TUESDAY, MAY 24, 1932.

(*Morning*)

Chairman, C. E. BRADLEY, Tulsa.
Secretary, GEO. H. GARRISON, Oklahoma City.

9:00 *Clinics*—Solarium, Morningside Hospital.

11:00 *Address* — FRANK NEFF, Kansas City, Mo.

(*Afternoon*)

1:30 o'Clock—Mayo Hotel

Chairman's Address—C. E. BRADLEY, Tulsa.

Infantile Tetany—WM. TAYLOR, Oklahoma City. Discussion opened by M. J. SEARLE, Tulsa.

Rheumatism — HUGH GRAHAM, Tulsa Discussion opened by G. H. GARRISON, Oklahoma City.

Diarrhea—B. H. NICHOLSON, Oklahoma City. Discussion opened by F. S. ETTER, Bartlesville.

Enuresis—C. F. PARAMORE, Shawnee. Discussion opened by CLARK H. HALL, Oklahoma City.

Pyelitis—HUGH J. EVANS, Tulsa. Discussion opened by CHARLES E. WHITE, Muskogee.

SECTION ON DERMATOLOGY AND RADIOLOGY

Chairman, CHAS. J. WOODS, Tulsa.

Secretary, CARL BRUNDAGE, Oklahoma City.

The following program will be offered in the Crystal Ball Room, Hotel Mayo, Tuesday, May 24th:

10:00 to 12:00 *Dermatologic Clinic.*

12:00 to 1:00 Luncheon.

1:00 to 2:00 Discussion of Clinical cases.

SECTION ON EYE, EAR, NOSE AND THROAT

Chairman, A. L. GUTHRIE, Medical Arts Bldg., Oklahoma City, Oklahoma.

Secretary, J. F. GORRELL, Medical Arts Bldg., Tulsa, Oklahoma.

WEDNESDAY, MAY 25. 1932.

1. President's Address—*Preliminary Observation of Bacteriophage in the Respiratory Tract*—A. L. GUTHRIE, Oklahoma City.
2. *Examination of the Ear in Industrial Accidents*—T. G. WAILS, Oklahoma City. Discussion opened by M. K. THOMPSON, Muskogee.

3. *The Management of Paralysis of the Ocular Muscles*—CHARLES B. BARKER, Guthrie. Discussion opened by CHARLES HARALSON, Tulsa.

4. *Some Suggestions Regarding the Tonsils*—H. COULTER TODD, Oklahoma City. Discussion opened by W. M. JONES, Tulsa.

5. *Treatment of Chronic Maxillary Sinusitis*—JAMES C. BRASWELL, Tulsa. Discussion opened by EDMUND S. FERGUSON, Oklahoma City.

6. *Iodized Oil in Diagnosis of Chronic Maxillary Sinusitis*—ARTHUR H. DAVIS, Tulsa. Discussion opened by HARRY PRICE, Tulsa.

7. *Traumatic Perforation of the Nasal Septum.* Report of interesting case—HOWARD S. BROWNE, Ponca City. Discussion opened by ROY W. DUNLAP, Tulsa.

THURSDAY, MAY 26, 1932.

Address—Some Aspects in the Etiology and Treatment of Acute and Chronic Glaucoma—E. J. CURRAN, Kansas City, Missouri.

8. *Tumors of the Naso-Pharynx*—WM. BONHAM, Oklahoma City. Discussion opened by H. COULTER TODD, Oklahoma City.

9. *Infectious Mononucleosis*—C. M. FULLENWIDER, Muskogee. Discussion opened by D. W. MILLER, Blackwell.

10. *Eye Grounds in Everyday Practice*—ALONZO C. MCFARLING, Shawnee. Discussion opened by W. A. COOK, Tulsa.

11. *Stereoscopic Treatment of Heterophoria*—W. A. HUBER, Tulsa. Discussion opened by L. M. WESTFALL, Oklahoma City.

12. *Tracheotomy, It's Indications and Management*—L. C. MCHENRY, Oklahoma City. Discussion opened by A. W. ROTH, Tulsa.

13. *Agranulocytic Angina*—J. C. MACDONALD, Oklahoma City. Discussion opened by WANN LANGSTON, Oklahoma City.

14. *Sinusitis in Children*—J, W. BEYER, Tulsa. Discussion opened by FORREST S. KING, Muskogee.

SURGICAL SECTION

WEDNESDAY, MAY 25, 1932.
(11:00 A. M.)

FRED S. WATSON, Okmulgee, Chairman.
W. G. HUSBAND, Hollis, Secretary.

Address by the Chairman—FRED S. WATSON, Okmulgee.

The Gall Bladder—WALTER E. SISTRUNK, Dallas, Tex. Discussion—LEROY LONG, Oklahoma City.

A Method of Determining Percentage of Partial Permanent Disability for Industrial Courts—EARL D. MCBRIDE, Oklahoma City. Discussion — CURT VONWEDEL, Oklahoma City.

Occipito-Posterior Position—DICK LOWRY, Oklahoma City. Discussion—M. B. GLISMANN, Okmulgee.

Indication for Operation in Minor Gynecological Disease—ARTHUR E. HERTZLER, Halstead, Kansas. Discussion—CHARLES D. O'HERN, Tulsa.

Phrenicectomy as an Aid in the Treatment of Pulmonary Tuberculosis — FLOYD MOORMAN, Oklahoma City. Discussion PHIL MCNEIL, Oklahoma City.

Perforating Ulcers of Stomach and Duodenum—ROY FISHER, Frederick. Discuscussion—FRANK MCGREGOR, Mangum.

Gynecology—S. N. MAYBERRY, Enid,. Discussion—JOHN H. WHITE, Muskogee.

Femoral Hernia—OSCAR WHITE, Oklahoma City. Discussion—G. A. KILPATRICK, Henryetta.

Burn Contractures—JOHN F. BURTON, Oklahoma City. Discussion—A. L. BLESH, Oklahoma City.

A Further Study of Thyroid Problems—MARCUS O. SHIVERS, Colorado Springs, Colorado. Discussion—HORACE REED, Oklahoma City.

Trans-urethral Prostatectomy—REX BOLEND, Oklahoma City. Discussion—HENRY BROWN, Tulsa.

Low Back Pain With Particular Reference to the Congenital Abnormalities in the Lumbosacral Region—FRANK DICKSON, Kansas City, Missouri. Discussion—KELLY WEST, Oklahoma City.

Eclampsia, a Discussion of Its Medical and Surgical Treatment—GEORGE R. OS-

BORN, Tulsa. Discussion—WALTER W. WELLS, Oklahoma City and J. G. SMITH, Bartlesville.

Fractures of the Tibia and Fibula—CHARLES R. ROUNTREE, Oklahoma City. Discussion—WADE SISLER, Tulsa.

Carcinoma of the Cervix — WENDELL LONG, Oklahoma City. Discussion—F. L. CARSON, Shawnee and PAT FITE, Muskogee.

Causation and Treatment of Simple Goiter—J. W. HENDRICK, Amarillo, Texas. Discussion—L. S. WILLOUR, McAlester.

Importance of Early Diagnosis of Brain Tumors—HARRY WILKINS, Oklahoma City. Discussion—NED R. SMITH, Tulsa.

Case Report of Bilateral Orbital Abscesses following Sinusitis—FRED S. CLINTON and BENJ. W. WARD, Tulsa. Discussion PAT FITE, Muskogee.

COMMITTEE REPORTS

These reports are made in compliance with provisions of the Constitution and By-Laws which call for publication of such matter in the issue of the Journal preceding the Annual Session.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITAL

To the President and the Members of the House of Delegates of The Oklahoma State Medical Association:

It is the belief of the members of this committee that a "report" should really have something to tell about—that it should record some definite knowledge or observations, in order that this knowledge may become the property of a larger group of people—in this case physicians; to the end that the conditions which the report explains may be commended and approved. Or if the conditions are not favorable, that they may be perhaps corrected by securing the intelligent and active cooperation of the profession at large.

In fulfilment of this belief the chairman of the committee recently made a visit of inspection to our State Medical School, the University Hospital and the Childrens' Hospital at Oklahoma City, and this report includes some of the observations of that visit.

Little need be said in regard to the Medical School. Rated since March, 1920, as a Class 'A' School, it is in good hands so far as the faculty is concerned. Our concern is, as to whether political interference and executive bungling together with the denial by the legislature of proper financial support will not result in the loss of our high position in medical education. It behooves all the members of our profession to use their every influence to explain this danger to our representatives in our legislative and executive offices.

It is to be regretted that "Medical Education" can not begin far enough back in our body politic to make its way into the crania of some of our legislators and executives. But that unfortunate defect we must try to remedy.

At the University Hospital the waiting rooms were crowded, with sick and ailing men and women who were striving to regain health and the ability to earn a living. It is to be remembered that these people come not only from Oklahoma City and the immediate environment, but from all over the state so that this hospital and its staff serve directly or indirectly all of the state.

The records show that apparently a few of the physicians of the state utilize the facilities and the staff of the University Hospital for the diagnosis of some of their private cases. Be that as it may, the work which the University Hospital is doing should be of inestimable value both economically and scientifically to the whole state. Economically because many of these patients are returned as self supporting to their home communities. Scientifically, because the data as to the medical facts gathered from the study of the mass of cases should be sifted and classified and made available to all physicians. But for the attainment of this larger purpose—at least adequate if not generous appropriations of financial support must be granted by our legislators.

The fifteen dollars per week which the county is supposed to pay does not cover even the hospital care, to say nothing of the enormous amount of gratuitous work in diagnosis, in medical and Surgical treatment which is contributed by the members of the hospital staff and the faculty of the Medical School. As a matter of fact, the Superintendent has figured that whereas the county pays $2.15 per day for the care of patients, the actual cost is approximately $4.00, leaving an actual daily deficit for each patient.

Since many of the counties are unable to pay the above small charge it has been necessary for the University Hospital to carry unpaid accounts in excess of $300,000.00.

In this connection another significant fact was learned; whereas, the appropriations for the Medical School, University Hospital and the Childrens' Hospital total some $500,000, the minimum value of the gratuitous services rendered by the the official staff of the University Hospital of Oklahoma School of Medicine to patients in the University and Crippled Childrens' Hospital for the fiscal year 1930-31 totals more than $700,000. I am quoting from statistics in the Superintendent's office where they can be verified by any one at any time.

Most of the Hospital beds were full and there is a long waiting list. This means that the hospital is overcrowded and more beds and better facilities are greatly needed in order to care for the clinical as well as for the teaching work of the hospital.

The Social Service Department is under excellent supervision and is doing its best with limited means and help to rehabilitate individuals, and to remedy the home and environmental conditions out of which illness and loss of earning capacity may have come.

The members of the hospital staff and of the medical school faculty are all engaged in the amelioration of suffering, giving unstintedly of

their time and energy and thought. It would seem that their findings and experiences and conclusions, the statistics which they could gather should be made available to all. But to this end they must be provided with better facilities, more clerical help in order that their findings may be made usable and useful.

No words are adequate to tell of the fine reconstructive work which is being done by the staff members at the Crippled Childrens' Hospital. Such an institution can be described only as a blessing to the State. It is regrettable, however that due to our tardiness to see a public need it should have been left largely to the forsightedness and humanitarian instinct (largely) of a private citizen to provide this magnificent institution. But it is a fine thing for our state that such men exist in our midst and are willing to contribute so generously for the common good. All honor to them. Rather than to put obstacles in the way of such spirited citizens, it would seem to be the part of decency and wisdom, to support their work and their efforts for the public welfare—and that not only with our "moral support" but with wise and adequate appropriations of public moneys.

The Extension Department of the Medical School has done excellent work in providing medical clinics and short time graduate courses for the physicians of the State. Whether the lectures and the clinical teachers at these courses be from within or without the state, the Extension Department needs money in order to continue this service. Oklahoma should (have) establish (before this) an adequate Cancer Clinic, working in harmony with the national organizations for the eradication of this disease, and to make the proposed weekly conferences and other srvices of such a clinic available to all the physicians and people of the state, some means must be found to finance the organization. Where are these means to be found if not in appropriations of public money?

Closely related to this work is the need of enlarging the Pathological Laboratories of the Medical School and the Hospitals. More workers and better facilities are needed to utilize the material available for diagnostic and research purposes, (perhaps including another full time trained pathologist).

As physicians we have a right to be proud of the high standing of our State University Medical School. The scientific training qualifications of the faculty, as of the staffs of the associated hospitals are of the best.

But if these institutions are to serve their highest purposes, the treatment of disease on the one hand and the training of the physicians of the future on the other, two conditions are essential: Adequate financial support must be provided by the state, and the conduct of these institutions must be left only to those qualified by scientific training and temperament. It is fatal to progress in educational matters if political preferment rather than educational attainments dictates the appointment and the activities of our educators.

Private donations and bequests to our public hospitals and educational institutions can hardly be expected until assurance can be given that these institutions will be free of unwise political interference and party dominance.

In order that the highest functions of our State Medical Institutions may be realized, we the bona fide, scientific physicians of the state need to recognize the opportunities as well as the dangers which confront these institutions. It is only just that we commend the unselfish efforts which our colleagues at the front have made to maintain our high standards while deploring the malign influences which jeopardize those standards.

Having offered this brief for our State Hospitals, there is also a word to be said for the private hospitals of our state. These institutions are a necessary part of our community assets in the fight against disease. Apparently they must carry on, until the respective communities become enlightened enough to provide municipal or community hospitals. Since only through such institutions, citizens do join in the common duty of their maintenance. For this is true: Sickness and disease and accidents and proverty should not be the affair of the physicians alone, either as private practitioners or as owners of hospitals. For we doctors pay our taxes as do other citizens, and when in addition we are forced to the gratuitous care of too many indigent sick we are burdened with a double taxation which is unfair in the extreme. And as yet we have no recourse. Not all our indigent poor can be sent to the University Hospital. Its capacity is too small and waiting list too large. And yet our county commissioners over the state too uniformly disclaim any responsibility for the care of the poor sick or at best will grant only an inadequate allowance for care by the private hospital. In addition, almost daily automobile and other accidents, with their usual toll of crippled patients requiring special care and leaving behind a mass of unpaid accounts which are likely to bankrupt the less hard hearted doctors and hospitals. For while any so called hotel may legally collect or punish an unpaid board bill, the owners of private hospitals can only hold the sack. And the end and the remedy is not yet. It behooves the thoughtful members of our profession to ponder these problems, for in the end they concern all of us physicians. How we meet them will determine whether real education is becoming common among the profession.

A. S. RISSER, M.D., Chairman,
ARTHUR W. WHITE, M.D.,
FRANK H. McGREGOR, M.D.

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

A great deal of time and money are spent by the members of the medical profession to keep up to date and abreast of the times in the science of medicine. This is as it should be. But how little is spent in keeping up to date on how to manage our financial relation with our patients. There are ways and means of keeping abreast of the times in financial matters that is entirely outside the realm of medical science. All the losses in practice are not uncollected bills. For example, there is very much to be said about how to approach a patient in discussing financial matters, to know what to charge and when to charge it. There are also many other phases.

Members of the Committee on Medical Economics knew that a course on Practical Economics was being given to the dentists of the State by

the Extension Division Department of Post-Graduate Medical and Dental Study of the University of Oklahoma. Your Chairman discussed with Mr. L. W. Kibler, Director of Post-Graduate Study, the feasibility of offering this course to the medical profession.

Following this discussion, the first thing necessary was to know if such a course could be applied to the medical profession. To determine this, the Extension Department conducted a survey. Their field workers went into several of the doctors' offices in various points throughout the state. Results of this survey and reports from the doctors whose offices were visited, thoroughly indicates that not only is a course applicable, but highly desirable. The Councilors of the state have been informed of this survey and the results, and this matter will be presented to them at their next meeting. From the knowledge your Chairman has of this work, it is hoped that one of the several plans suggested will be adopted by the Councilors, so that the members of the Oklahoma State Medical Association may have the benefit of this course.

Among the other things studied by the Committee are: (1) Cost of Medical care; (2) Group practice; (3) Charity Clinics. One of the serious problems considered by the Committee is the piling-on to the medical profession of semi-charity and charity cases.

In these times of lessened income and increased taxes, "Economics" to the medical man has become "Practical Economy." Just as we have learned better medical treatment, so we must learn better economy. We cannot improve the financial status of our patients, but we can be more business-like in our financial relations to them. If you go into a store to buy a suit of clothes you either pay cash for it or you establish a credit. But when new patients come to you for examination and treatment you assume that they are alright and permit them to leave the office without even asking them for your fee or making any arrangement with them about their payment of it. This may be a grand professional idea, but its a very poor business procedure.

We are becoming more and more convinced that the doctors are "boobs" to be imposed upon. We are called upon entirely too much to donate our services, whether it be for the Catholic Clinic, the Y. M. C. A., the Boy Scouts, the County Clinic, The Jewish Charities, "and what have you," and then treat all charity patients free. No one doctor wants to make himself the goat and oppose these things, but it is the duty of the Committee to unite the profession as a whole against this unjust burden.

Let the County Commissioners of the State assume the financial responsibility and pay for it from the taxes of the community. We cannot see any more reason why a doctor should be asked or expected to give his services free in these cases than the County Judge or Commissioners should serve without a salary. It is strictly "uneconomic." It is absolutely "incompatible." Not only do other people expect us to do this, but the patients themselves almost demand it. They call us at any hour of the day or night and often are highly indignant if we inquire about their ability to pay. We see no great breech of professional ethics in a doctor being wise enough to introduce a little business principle in his profession. If we did not have this demand made on our time and services, then we could afford to do our work at a smaller fee and some of this howl about the "high cost of medical care" to the middle class would be stopped. If it were the customary thing for the poor of the community to call up the various grocers and have their food supplies sent out and not pay for them, everyone else would soon find that the cost of their own groceries was increasing to make up for the added loss to the grocer.

Some may call it a disgrace that our noble profession must become so commercialized, but it would be a far healthier condition and a much more comfortable atmosphere for all concerned, if all of us would study and put into practice "Better Business Methods."

WM. H. BAILEY,
J. HUTCHINGS WHITE,
A. RAY WILEY, Chairman.

REPORT OF COMMITTEE ON CANCER STUDY AND CONTROL

The past year has been marked by no unusual or startling discoveries in the field of cancer. The average number of specific cures have been announced through the public press, though like the thousands of preceding remedies, including the much heralded glandular extract of two years ago, they have slowly faded under the penetrating light of scientific analyses and proper case control. Research laboratories throughout the world have made excellent progress during the past few years, more especially in their studies of the behavior of the cancer cells cultivated outside the body; whereas, in former years their time was largely devoted to the testing of some recently announced cancer cure.

Two recent announcements from research laboratories are worthy of mention: From the University of Illinois there comes a report of experiments with intravenous injections of selenium into cancerous mice. This chemical element was tried in the treatment of cancer some years ago, and for a while gave considerable encouragement, though unfortunately the host as well as the cancer usually succumbed to the treatment. It is reported that in their recent experiments they have rendered this electro sensitive element less toxic to the patient.

Other recent research work which may prove of value in diagnosis as well as treatment of metastatic cancer comes from Tulane University. It consists of injections of a solution of thorium into the lymph glandular system, after which the glands become visible when examined with the X-ray. Thorium is an element related to radium and will emit secondary radiation when acted upon by radium and X-ray. It is therefore hoped that by this method of intralymph injection, not only will metastatic malignancies become visible but also they may become more successfully radiated, when acted upon by radium and X-ray.

Your state cancer committee, cooperating with the State Committee of the American Society for the Control of Cancer, has, during the past year, distributed more than two thousand booklets edited by the American Society for the Control of Cancer.

During the month of March, a series of six specially prepared and thoroughly censored lectures upon cancer was broadcast over University Radio Station WNAD by various members of our

State University Medical Society. These lectures have stimulated wide interest, even beyond our expectation, in requests for more information and literature. Other state university radio stations have also asked for copies of these lectures that they might likewise institute a similar cancer educational program. It has been suggested that perhaps cancer education should be carried into our colleges and high schools, as well as before public gatherings of aduts. It is believed by many that by giving such information to the younger generation, more successful cooperation and results may be accomplished.

It is interesting to note that during the last five years, since better state statistics are available, the death rate from cancer in Oklahoma is decreasing at the rate of about forty cases per year. This in the face of better diagnosis and more complete reporting of vital statistics is indeed gratifying, and should cause us to take courage and go forward.

Our state has twice during the past year been visited by a field representative, Doctor Cox, of the American Society for the Control of Cancer. The prime object of such visits was to discuss the possibility of organizing state cancer diagnostic clinics. Such diagnostic clinics have been accomplishing a great deal of good in other states. More recently, a field representative of the American College of Surgeons paid a visit to our state with the same object in view.

Doctor Newquist, representative of the American College of Surgeons, after making a brief survey, urged that a disgnostic clinic should be established at once in connection with our State University Hospital and Medical School. Such a clinic is now established at our State University Hospital and is beginning to function. It is anticipated that other like cancer specialists in the various branches could be organized into a cooperative staff.

Your committee has been handicapped by the lack of funds to meet the necessary expense of postage, express, and other incidentals in the distribution of printed booklets and other literature which have been furnished without charge by the American Society for the Control of Cancer. We believe that our state association might well afford to appropriate not less than one hundred dollars to take care of such necessary incidental expenses, which have thus far been met by individual physicians.

At the suggestion of the American Society for the Control of Cancer, we are recommending that the chairman of our Committee of Cancer Control of our state association should not any longer be one and the same physician as the one who is state chairman of the American Society for the Control of Cancer, though it may be advisable for such physician to be a member also of the State Committee. The wisdom of this policy is obvious, since by two separate cooperating committees a larger educational program may be instituted.

EVERETT S. LAIN, M.D., Chairman,
FRANK H. McGREGOR, MD.,
JAMES STEVENSON, M.D.

REPORT OF THE COMMITTEE ON INDUSTRIAL AND CONTRACT PRACTICE

Since the meeting of the Association in 1931, there has been very little change in the situation as to industrial and contract practice in the State of Oklahoma, except those changes brought about by the general economic condition of the country.

There has been a marked falling off of industrial practice throughout the state due to curtailment of industry generally and there is a tendency on the part of many employers because of the liberality of awards by the Industrial Commission, to scrutinize their potential employes much more closely than heretofore, with the result that particularly corporations are much more careful as to the physical condition of the men they employ.

No new serious attempts at contract practice have come to the attention of the Committee in the past year. It seems as though the present depression has had a rather marked deterrent effect upon such undertakings. In those places where such practices have been initiated in the past, the organized profession has taken the stand that it is unalterably opposed to the commercialization of the profession by laymen and the Committee feels that the Association should be very jealous of this position and do everything in its power to keep the profession out of political domination by lay employment of the contract type wherever possible.

PAT FITE, Chairman,
C. E. CLYMER,
A. RAY WILEY.

ANNUAL REPORT
of the
SECRETARY-TREASURER-EDITOR
May 1, 1931 to April 30, 1932

To Members of the Oklahoma State Medical Association:

In conformity with the Constitution and By-Laws, I hereby submit the report of my work of the past year.

Detailed statements of all activities, financial transactions, duplicate deposit certificates and other business have been submitted to the Council for their audit.

Membership: On April 30, 1931, we had 1602; on this date we have 1502. Naturally we have lost some of our membership, due to the depression, and this also applies to advertising matter.

Deaths of Physicians: Since our last meeting the following deaths have been reported. All of these were either members at the time of their death or had been members prior to that:

Dr. B. F. Applewhite, Tecumseh.
Dr. J. B. Beckett, Spiro.
Dr. Walter C. Bradford, Shawnee.
Dr. E. C. Byram, Okmulgee.
Dr. C. H. Day, Pawhuska.
Dr. P. A. Edwards, Nardin.
Dr. E. S. Gooch, Lawton.
Dr. E. J. Gray, Tecumseh.
Dr. A. L. Gregory, Muskogee.

Dr. Alfred Griffith, McAlester.
Dr. Robert H. Henry, Ardmore.
Dr. Jefferson D. Kiser, Bartlesville.
Dr. J. W. Marshall, Shawnee.
Dr. Wilbur E. Rammel, Bartlesville.
Dr. W. H. Rogers, Tulsa.
Dr. J. D. Scott, Holdenville.
Dr. J. C. Stephenson, Oklahoma City.
Dr. A. L. Stocks, Muskogee.
Dr. Charles K. Tillison, Bartlesville.
Dr. L. W. Troutt, Afton.
Dr. J. W. Tucker, Lindsay.
Dr. J. B. Wear, Poteau.
Dr. A. C. White, Chickasha.
Dr. T. F. Wood, Sallisaw.
Dr. E. N. Wright, Olney.

Medical Defense: The following cases have been settled.

Okmulgee County, No. .....
Tulsa County, No. .....
Seminole County, No. .....

In addition to these there are pending the following unsettled cases, status unknown:

Carter County, No. 18723.
Oklahoma County, No. .....
Bryan County, No. .....
Ottawa County, No. .....
Ottawa County, No. .....
Ottawa County, No. .....
Tulsa County, No. .....
Pottawatomie County, No. .....
Kiowa County, No. .....
Kiowa County, No. .....
Kiowa County, No. .....
Okmulgee County, No. .....

Journal and Advertising: Considering the depression our Journal has stood up very well. We have received from our advertisers $6,022.85.

The Journal: For the calendar year, 1931, was the exact size of 1930. We believe, however, there has been a great deal of improvement in the reading matter submitted by our authors. Our articles as well as abstracts supplied us by various contributors, compare very favorably with those to be found in very high class journals. It is gratifying to note that many of the articles published in our Journal are given wide notice in various Journals outside of this state.

Post Graduate Courses: Since our last meeting we have expended $1050.00 for Post Graduate Courses, $350.00 of which was contracted for before our last meeting.

FINANCIAL STATEMENT

The Oklahoma State Medical Association
Dr. C. A. Thompson, Secretary-Treasurer-Editor
May 1, 1932.

Receipts

Advertising, Subscriptions & Exhibits		$ 6,022.85
County Secretaries		6,144.00
Interest on Liberty Bonds		425.00
Total Receipts		$12,591.85
Balance cash on hand in bank, May 1, 1931		7,090.23
Total		$19,682.08

Expenditures

Printing Journal		$ 5,982.90
Office supplies, expense and Misc., Printing		405.16
Office Rent		247.82
Telephone, Telegraph & Press Service		145.22
Treasurer's Bond and Audit of books		150.00
Postage		230.64
Post Graduate course and Movie films		1,482.00
Attorney's Fees, order of council		250.00
Council and Delegates' Expense		1,008.68
Transfer to Medical defense fund		150.00
Expense Okla. City and Tulsa meetings		358.40
Extra Clerical work		51.50
Oltha Shelton, Salary		1,360.00
Dr. C. A. Thompson, Salary to March 31, 1932		2.400.00
Total Expenditures		$14,222,32
April 30, 1932, Cash on hand in bank	$ 5,463.76	
Less check No. 3517 outstanding	4.00	5,459.76
Total		$19,682.08
May 1, 1932, Cash on hand in The Commercial National Bank, Muskogee, Oklahoma		$ 5,459.76
U. S. 4th 4¼ Liberty Bonds, in Safe deposit box Commercial National Bank, Muskogee, Oklahoma		7,000.00
Total Cash Assets		$12,459.76

THE MEDICAL DEFENSE FUND

The Oklahoma State Medical Association
Dr. C. A. Thompson, Secretary and Treasurer
May 1, 1932.

Receipts

May 1, 1931, Balance Cash on hand in bank	92.73
November 3, 1931, Oklahoma State Medical Association	150.00
Total	$ 242.73

Expenditures

December 2, 1931, Attorney fee, Farr vs Sadler, Okmulgee County	$ 100.00
January 18, 1932, C. S. Summers, Settlement, Hart vs Wirth, Tulsa Co.	100.00
Total	$ 200.00
May 1, 1932, Balance Cash on hand	42.73
Total	$ 242.73

May 1, 1932, Balance Cash on hand in The Commercial National Bank, Muskogee, Oklahoma	$ 42.73
U. S. 4th 4¼ Liberty Bonds in Safe deposit box in The Commercial National Bank	3,000.00
Total Cash Assets, Medical Defense Fund	$ 3,042.73
May 1, 1932, Total Cash Assets:	
Oklahoma State Medical Ass'n.	$12,459.76
Medical Defense Fund	3,042.73
May 1, 1932, Grand Total Cash Assets	$15,502.49

Respectfully submitted,

C. A. THOMPSON,
Secretary-Treasurer-Editor.

(Signed) H. A. LEWIS,
Auditor.

COMMERCIAL NATIONAL BANK

Muskogee, Okla., May 4, 1932.

Dr. C. A. Thompson, Secretary-Treasurer,
Oklahoma State Medical Association,
City.

Dear Sir:

This is to certify that according to our records, the following accounts had a credit balance, subject to check, at the close of business April 30, 1932:

Oklahoma State Medical Association	$ 5,463.76
Medical Defense Fund	42.73

Yours very truly,

A. H. DAVIDSON,
Cashier.

MELORHEOSTOSIS LERI: FLOWING HYPEROSTOSIS OF SINGLE EXTREMITY: REPORT OF TWO CASES

According to Ernest Kraft, Chicago (Journal A.M.A., Feb. 27, 1932), in 1922 Leri and Joanny described a new type of hyperplastic bone lesion which is confined to a single extremity, extending from one end to the other in a linear track but usually leaving a few unaffected areas along the course. The term "melorheostosis" is derived from the Greek and means "flowing hyperostosis of a limb." The disease is characterized by proliferation of ivory-like now bone in the cortical areas. The lesions may assume different forms in different parts of the extremity, sometimes resembling osteoma, at other times suggestive of spurs, periostosis, calcinosis, or osteoplastic malignant conditions. When the proliferative process has caused considerable expansion, the hyperplastic material is of irregular wavy contour, with numerous hills and valleys, forming a linear track parallel to the long axis of the bone. Leri has likened these irregular masses, running downward from the shoulder or pelvis, to the molten stream of a candle. The sharp localization of the process to one side of a bone was compared by Lewin with a condition in which it rains on one side of the street and not the other. The distribution does not correspond with the course of vessels or peripheral nerves. As the disease advances, pathologic products are deposited in periarticular areas, occasionally causing complete fixation of a joint. The unaffected parts of bones adjacent or opposite to the hyperostosis frequently show decalcification and rarefaction. There is rarely a bowing of the diseased bones, and, in contrast to other disorders, one finds an extreme compactness of the deformed extremity. Pathologic fracture has never been described in melorheostosis. This feature is characteristic and of importance in differential diagnosis. When the masses assume larger dimensions, pressure on nerves and blood vessels may result in transitory edema, congestion of veins, and neuralgia. Such alarming conditions, however, respond readily to immobilization and tend to disappear in a short time. Tender, indurated erythematous areas are sometimes present on the skin of the affected extremity. The first signs are noted as a rule during childhood or adolescence. Of fourteen cases reported in the literature, the history began after the period of bone development in only four. Since the onset is quite insidious and the progress extremely slow, it is impossible to obtain reliable data as to the first manifestation. One patient was 5 years of age and one, 42 years of age, when symptoms began. Between these two extremes the average age of first complaint is 19 years among twelve patients. The spread between onset and first examination was twenty-nine years in the first two cases. The symptoms, even in advanced cases, may be extremely vague. In children the subjective symptoms are more pronounced than in older persons, although the roentgen observations are not as striking. The first deformities are sometimes accompanied by pain. More often they develop without any symptoms. Invariably the lesions are painful at some stage of their progress. The pain is not intense. It is provoked by strain and pressure and disappears either gradually or suddenly—sometimes for years despite persistent progress of the lesions. The most annoying symptoms are transitory stiffness and limited motion of joints, and the occasional instances of permanent ankylosis. Considering the characteristic features, one may find little difficulty in differentiating the disease from other bone disorders of inflammatory and dysplastic nature. Tuberculous and syphilitic osteitis can be ruled out by history, physical examination and serologic tests. Also malignant neoplasms have to be disregarded in the absence of additional observations. The disease usually shows a very slow progress and may become stationary for years. The prognosis is favorable. There has never been any evidence of a malignant character. These facts should be kept in mind before any radical therapy is attempted. No definite therapeutic achievements have been reported. Because of the meager symptomatology the patients are frequently hesitant in submitting themselves to therapy. Surgical correction is rarely indicated. Relief has been reported from heat and physical therapy. In one of two cases reported by the author an improvement was observed when repeated roentgenograms were taken in one session. One has to keep in mind, however, that spontaneous remission of symptoms is a characteristic feature of the disease. The author calls attention to the fact that it would be instructive to apply radiation therapy systematically. One might then gain a better knowledge of the biology of the abnormal cells and subsequently of the unexplained pathogenesis.

ABSTRACTS, REVIEWS, COMMENTS AND CORRESPONDENCE

NEUROLOGY AND ENDOCRINOLOGY

Abstracts, Reviews and Comments Edited by Henry H. Turner, M.D.
319 Osler Medical Building, Oklahoma City

Insulin Agina. Parsonnet, A. E. and Hyman, A. S. Am. Int. Med. 4:1247, 1931.

These authors report a series of eighty-nine cases of coronary thrombosis, twenty-two of which had diabetes mellitus. Seven of these had severe anginal symptoms following insulin injections. They believe the shock of sudden lowering of the blood sugar in a heart accustomed to a high blood sugar is responsible for the symptoms. They caution against insulin therapy in coronary disease and state that it should not be used unless all dietary measures fail.

An Hereditary Anterior-Pituitary Deficiency in the Mouse. Smith, J. E. and MacDowell, E. C., Anat. Rec. 46:249, 1930.

This is a very interesting preliminary report of hereditary dwarfism appearing in a strain of mice reared by these authors.

The other endocrine glands present the same abnormalities as that of hypophysectomized rats. Sections reveal no eosinophiles in the anterior lobe of the pituitary but an abundance of connective tissue. Daily anterior-pituitary transplants in these dwarfs induced a normal body growth.

Psychiatry and Abnormal Psychology. Arthur Ernest Davies, Brit. J. M. Psychol. 10:312 (Jan.), 1931. Abst. Arch. Neur. and Psychiat. Jan., 1932.

While psychiatry is as ancient as medicine, modern psychiatry has evolved out of medical specialization and has included within its scope phenomena that have been discarded by other specialists. The study of these phenomena has shown that successful treatment of mental disorders demand knowledge and skill not possessed by the general physician. The author uses the term psychiatry in its strict medical sense; namely, the diagnosis and treatment of derangement of behavior with a view to classification. This tendency to create entities that are as well defined as in other and older branches of medicine has given confidence, but it has been misleading. Two types of psychiatrists are described: one group seeking only a neurologic lesion, the other seeking in addition to find mental lesions. Both of these approaches are included under the name of psychiatry. Neurologic psychiatrists start with the assumption of the physical nature of behavior disorders. He studies the traits according to the established principles of other branches of medicine because he argues that since psychiatry is a branch of medicine, it must be governed by the same principles. The inherent weakness of the neurologic, or the strictly medical, point of view, is that it cannot conceive that a mental disorder has any but a physical basis. Psychologic psychiatrists do not deny that behavior disturbances are conditioned by neurologic lesions; however, they carry to the study and diagnosis of these conditions a point of view that goes beyond the nerve lesion and deals with mental phenomena. These are phenomena which the neurologic psychiatrists place outside the realm of scientific investigation, and hence the psychologic psychiatrist is regarded as unscientific.

The author then discusses the basis for the scientific approach, and quotes Hart as describing science as "the term applied to a systematic set of beliefs which have been reached by the application to the object of a particular method, the method that has established physics and chemistry." He shows that when psychologic sciences follow these methods, their results will become as much a part of scientific medicine as are the contributions of neurologic psychiatrists. He points out the need of a well ordered mental pathology that would "compare favorably in extent and thoroughness with that which has placed neurologic psychiatry in its relatively secure position." He shows that the psychologic psychiatrist is in a sounder position from a scientific standpoint because he is not bound down to a consideration of one set of facts, as is the neurologic psychiatrist. He has a broader base on which to build his science and can go beyond the boundaries of the physical sciences to seek the facts that cause sickness of the mental patient. This leads the author to conclude that modern psychiatry should be regarded as a branch of science and not as merely a branch of medicine.

The psychologic psychiatrist works at a greater disadvantage than the neurologic psychiatrist because of the lack of an organized technic. Attempts to make up for this lack have "eventuated in theories of mental disease which, for the most part, have no foundation in a systematic knowledge of normal mental life and which are little more than generalizations that are expressive of the physician's personality rather than of a scientific analysis of the symptoms of the disease." A physician, as a rule, is not oriented in normal psychology. This has led to the building of theories regarding the nature of mental life from the rather intensive observations that have been made on sick people. G. Stanley Hall is quoted as warning that psychoanalysts will be "somewhat too ready to apply their findings to the operations of the normal mind. He implies that the psychoanalytic school of today has not heeded this warning. The author thinks that psychologists must be allowed to work hand in hand with the medical specialists if a more orderly and scientifically established mental pathology is to be built up.

Treatment of Tetanus by Intrathecal Injection of Carbolic Acid. S. Suvansa, Lancet 1:1075 (May 16), 1931.

This author states that concentrated antitetanic serum is the recognized treatment for tetanus. Its uncertain and often disappointing results induced the author to try phenol. He experimented with different strengths of phenol solution physiologic salt solution and found that a 1:400 solution was the strongest that did not affect the leukocytes. The solution was prepared for treatment by adding 400 c.c. of physiologic solution of sodium chloride to 1 c.c. of liquified phenol which had been sterilized by boiling before use. The dosage given was between 30 and 40 c.m. in adults and between 12 and 20 c.c. in children, but it must be varied according to the individual case. In a series of 14 cases he states that 10 patients which were very severe recovered.

This treatment of course is not without certain complications, such as irritation of the various cranial and spinal nerves, but these particular symptoms were transient. Acute nephritis was present in 3 of his cases; this treatment should therefore not be given to patients with kidney pathology. The author states that the advantages of this treatment are that its action is certain, one injection suffices, and that its only disadvantage is the possible danger in kidney disease.

Vomiting of Pregnancy. Vestibular Function. H. Frey and E. Herrmann, Wien. Klin. Wchnschr. 43:545 (May 1), 1930. Abstr. Arch. Neur. and Psychiat. Jan., 1932.

During the first stage of pregnancy, vomiting is noted in about 50 per cent of cases. Weak irritation of the inner ear causes a change in the position of the eyeballs and the head. Stronger stimulants, such as rotation, swinging and rocking, lead to vomiting and a drop in blood pressure. For these symptoms, vestibule, nerve and central connections are necessary, for it is apparent that vestibular reflexes may be influenced by the central nervous system.

Vestibular caloric tests were made on ninety-one pregnant women, of whom forty-nine were in from the second to the fifth month and forty-two from the eighth to the ninth month. Control tests were also performed on thirty non-pregnant women. Of the forty-nine women in the early stages of pregnancy, 91 per cent showed a more extensive labyrinthine reaction, while of the forty-two in the advanced stage, 69 per cent showed extensive labyrinthine reactions. However, only 43 per cent of the thirty controls showed this reaction. The author concludes that in pregnant women there exists a more pronounced vestibular reaction than in non-pregnant women. This increased capability is more noted in the earlier months of pregnancy, and it is concluded that the central nervous system governing the vestibular apparatus shows an increased irritability.

Treatment of Meningococcus Meningitis by Cisterna Puncture. Theodore Goldman and Albert G. Bower, Am. J. M. Sc. 181:414 (March) 1931.

These authors present the results of lumbar and cisternal puncture in the treatment of 98 cases of meningococcus meningitis. In the latter a lesser number of punctures and antimeningococcus serum was necessary for recovery. The mortality of the cisternal method was 27 per cent less than that for the lumbar route. They conclude, of course, that the cisternal method is the one of choice.

GASTRIC MUCIN IN TREATMENT OF PEPTIC ULCER

Arthur J. Atkinson, Chicago (Journal A. M. A. April 2, 1932), treated forty-five patients with history, signs, symptoms, laboratory evidence and roentgen manifestations of peptic ulcer with mucin. The patients were chosen because all the evidence concurred in the diagnosis. The therapeutic dosage of mucin totaled 90 Gm. a day, but three patients received as much as from 150 to 238 Gm. a day in a study of the effect on the gastric acidity. Ewald, fractional and motor test meals were given, and the stools examined for occult blood. The "acid test" as suggested by Palmer was used at first and later modified to coincide with Hardy's technic. The forty-three patients in the series became symptom-free within an average of 1.7 days. The types of ulcers treated in the series are tabulated. The average duration of ulcer history, which was 5.2 years, indicates the marked chronicity of the ulcer diathesis in this group. Eighteen of the patients were awakened by pain suggesting gastric retention or continued secretion. Thirty-five of the patients in the series had previous medical management, spending a total of 208 weeks in hospitals, an average of 5.9 weeks per patient. All obtained relief on mucin with a total of twenty-five weeks of hospitalization, an average of 0.71 week per patient. Fifteen, having distress while on medical management when first seen, were continued ambulatory and obtained complete relief with mucin. Although any form of therapy may bring about a remission, there is no doubt that remarkable results have been obtained in patients who were previously having distress on dietary or alkali management. The time of observation has been too short to prove that the improvement is permanent in a disease in which the natural history is so variable. The author feels fully justified in believing that mucin treatment is conducive to healing.

THE BAER MAGGOT TREATMENT OF OSTEOMYELITIS: PRELIMINARY REPORT OF TWENTY-SIX CASES

Edward Harlan Wilson, Charles A. Doan and David F. Miller, Columbus, Ohio (Journ. A. M. A., April 2, 1932), report that twenty-two of twenty-six children and adult patients, with either acute or chronic osteomyelitis, have been successfully treated with fly larvae during the past eighteen months in the university osteomyelitis clinics. The average healing time for all cases has been ten weeks, for those lesions occurring in children, seven weeks. The type of scar remaining is a distinct improvement in that there is an obliteration of the cavity occasioned by operation and the disease process through the ingrowths of healthy granulation tissue with at least partial restoration of the blood supply. The authors emphasize the fact that the best surgical judgment must always be exercised in the individual case and precede the after-treatment with fly larvae, if satisfactory results are to be obtained.

COMPLEX OF ECZEMA: DIAGNOSTIC AND ETIOLOGIC ANALYSIS

John H. Stokes, Philadelphia (Journal A. M. A., April 2, 1932), calls attention to the fact that the Germans, able students of the details of pathologic mechanisms, call eczema that form of dermatitis in which the epidermis exhibits an intrinsic quality of hyper-sensitiveness to irritants, specific or general. About 5 per cent of all human beings exhibit this intrinsic hypersensitivity. In order to clarify the field of "eczema" he proposes, for the moment, not to adopt this definition of eczema but to use a broader one, based on the view that all inflammations of the skin exhibit a complex rather than a simple etiology, analyzable on careful study into what might be called predisposing background and exciting causes. He defines an eczema, then, as a persistent dermatitis in which the predisposing causes or background outweigh the immediate cause or causes. The new German concept fits into this scheme as a subhead, for it becomes "eczema allergicum," to coin a phrase, in which epidermal hypersensitivity is the factor that dominates the picture. Thus one may speak of neurogenous eczema, or even neuromycotic eczema, in which an exciting cause such as a yeast infection leads to a dermatitis whose extension and persistence is in part due to the overshadowing influence of the nervous system on the sweat and vasomotor mechanisms, which supplies the background for the yeast growth. Thus "eczema" becomes again a broad etiologic conception, harmonizing with the very wise tendency of dermatology to return to general medical concepts and relations for the full comprehension of its problems. This seems a wiser use of the term than to apply it to single, local or special phenomena, anatomic or functional. The author proposes to speak not of seborrheic eczema, or mycotic eczema, or even of pure allergic eczema (a term of damnation to the Germans), unless the named designation overwhelmingly dominates the picture. Instead, he speaks of these symptomatic pictures as if they were components in a complex and looks at all eczema for the moment in the light of their interplay. He enumerates ten component factors that make up the etiologic background of "eczema" as commonly understood in American practice thus: (1) the hereditary or familial predisposition factor; (2) the ichthyotic or dry skin factor; (3) the seborrheic habitus or sebaceous dysfunction (oily skin) factor; (4) the pyogenic factor; (5) the mycotic or fungus infection factor; (6) the focal intoxication factor; (7) the metabolic factor with special reference to carbohydrate metabolism; (8) the allergic or hypersensitivity factor, general and specific; (9) the neurogenous factor, and (10) the diathetic state or eczema-asthma-hay fever complex. Distribution tells a surprising amount about an eruption, even before one has clearly identified the elementary lesions or parts of which it is made up. Certain of the foregoing factors have distributions roughly amenable to diagram. By a careful study of the stripped patient, the proportion of these various components taken in connection with the character of the lesions and the landmarks of ichthyosis (which is not a dermatitic state) may be estimated as the basis for diagnosis and treatment. A painstaking study of the patient's history and of familial and hereditary elements further contributes to diagnosis and prognosis. Of especial importance are the ichthyotic, seborrheic and pyogenic trends and the neurogenous and allergic background.

THE DANGERS OF USING IMPURE MUCIN IN TREATMENT OF PEPTIC ULCERS

Andrew B. Rivers, Frances R. Vanzant and Hiram E. Essex, Rochester, Minn. (Journal A. M. A., April 2, 1932), have demonstrated in certain specimens of commercial mucin the presence of large amounts of a secretagogue which by biologic tests seems to be histamine. The presence of this substance may be looked on as a contaminant which can be avoided if proper methods of preparation are used. Until a consistently standardized, pure product is supplied, it will be impossible to evaluate the therapeutic use of mucin.

REPORT OF EXAMINATION FOR LICENSES TO PRACTICE MEDICINE

Examination held at State Capitol, Oklahoma City, March 8th and 9th, 1932.
The following applicants passed:

Name	Year of Birth	Place of Birth	School of Graduation	Year of Graduation	Home Address or Previous Location
Caldwell, Charles Lory	1902	Bolivar, Mo.	Washington Univ.	1928	Chelsea, Okla.
Jones, Clyde Franklin	1901	Shelby, Okla.	Louisville Univ.	1927	Erick, Okla.
Kalbfleisch, E. Leopold	——	Winston, Mo.	Columbia, N. Y.	1916	Newton, Kan.
Neal, Leroy Jay	1899	Texas	Tulane Med.	1923	Shawnee, Okla.
Sanger, Welborn Ward	1906	Yukon, Okla.	Univ. of Okla.	1931	Yukon, Okla.
Cofe, David Frederick	——	Reedsburg, Wis.	Wisconsin Univ.	1931	Okla. City
Darby, Isaac Kermit (Col.)	1900	Austin, Tex.	Meharry Med.	1929	Houston, Tex.

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